THE

MEDICAL EXAMINER.

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NOTICE TO CORRESPONDENTS.

Communications and Books for notice should be addressed to the Editors, care of Messrs. Lindsay & Blakiston.

Letters, &c., connected with the *business affairs* of the Journal should be addressed to the Publishers.

Papers for publication must be received *before* the 16th of the month, or they cannot appear in the forthcoming number.

The following Journals have been received in exchange:
Medical News, Dec. 1853.
New York Journal of Medicine, Dec.
New York Medical Gazette, Dec.
New York Medical Times, ditto.
New York Journal of Pharmacy, ditto.
Nelson's American Lancet, ditto.
Boston Medical and Surgical Journal, (weekly.)
Buffalo Medical Journal, Nov.
Stethoscope, ditto.
Virginia Medical and Surgical Journal, Nov. and Dec.
New Hampshire Journal, January.
Ohio Medical and Surgical Journal, Nov.
Western Lancet, ditto.
Kentucky Medical Recorder, ditto.
St. Louis Medical and Surgical Journal, ditto.
Nashville Journal of Medicine, Dec.
Peninsular Journal of Medicine, ditto.
Iowa Medical Journal, ditto.
Southern Medical and Surgical Journal, ditto.
Southern Journal of Medical and Physical Sciences, Nov.
Montreal Medical Chronicle, Dec.
Upper Canada Journal, ditto.
London Lancet.
London Medical Times and Gazette.
Monthly Journal of Medical Science, Nov.
North Western Medical and Surgical Journal, ditto.
London Pharmaceutical Journal, Dec.
Revue Medico-Chirurgicale, Sept.
Archives d'Ophthalmologie, Oct.
Dublin Medical Press.

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BOOKS RECEIVED.

Hays' Lawrence on the Eye.
Bennett on Pulmonary Tuberculosis.
Transactions of New York Academy of Medicine.
Introductory by Dr. Paul F. Eve.
do. Dr. Wm. M. McPheeters.
do. Dr. H. M. Bullitt.
Communications received from Dr. Samuel Jackson and Dr. J. H. Wythes.

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The foreign correspondents of the Examiner will please direct their Exchanges and other communications to the care of Tribner & Co., No. 12 Paternoster Row, London, or Mr. H. Bosange, 21 Bis, Quai Voltaire, Paris.

THE

MEDICAL EXAMINER.

NEW SERIES.—NO. CIX.—JANUARY, 1854.

ORIGINAL COMMUNICATIONS.

On the use of Adhesive Plaster in the treatment of Fracture of the Patella. By JNO. NEILL, M. D. Surgeon to the Pennsylvania Hospital.

From the Notes of Dr. JAMES DARRACH, House Surgeon.

The frequency of fracture of the patella and the difficulty attendant upon its treatment, are sufficient grounds for calling attention to any plan of dressing which is supposed to have some claim to utility as well as to novelty.

The necessary separation of the fragments in transverse fractures by muscular contraction, the great force necessary to produce coaptation, and the inability to maintain it without inducing great pain and sometimes excoriation, are points with which every one is familiar who has had the management of injuries of this kind.

Until a comparatively recent period it was supposed impossible to produce a bony union of the patella, and that there was something peculiar in the tissue of this bone that prevented it; therefore some of the older surgeons made little or no effort to approximate the fragments. Even at the present day, although the possibility of a perfect bony union has been demonstrated over and over again, there are some who consider the pain con-

sequent upon the use of a retentive apparatus, and the excoriation liable to occur from tight bandaging, as too serious evils to be endured when the chances are so slight for a bony union.

It is unquestionably true, that many cases occur in which it is impossible to effect a bony union; when the periosteum is completely torn and the fragments separated for a great distance, and the soft parts contused considerably, perfect consolidation is not to be expected; at the same time it should be borne in mind, that the closer the approximation the shorter will be the ligamentous connection and consequently the more perfect will be the use of the limb subsequently, and therefore under all circumstances an effort should be made to approximate the fragments, provided it can be done in a manner which is effectual, comfortable and without risk to the patient.

A retrospect of the various means employed to carry out the well known indications in this accident will be not an inappropriate preliminary to the treatment employed in the two following cases.

Malgaigne has classified the different modes of treatment under three heads, which will be perhaps as easy a mode as any other of giving a clear and succinct account of the matter.

The *First*, includes all means which effect bony union by producing complete immobility of the limb.

Position is the only means recommended by some distinguished writers on the subject. Paul of Egina and Ambrose Paré contented themselves simply by *extending* the limb and maintaining it in that position.

Elevation was not contemplated by J. L. Petit in any other light, than that of effecting extension and favoring venous return, although he recommended the leg to be placed on a pillow. It was in 1772 that Valentine clearly announced that simple *extension* was insufficient and that *elevation* was necessary to overcome the contraction of the rectus muscle, and directed the heel to be elevated as high as possible. This he accomplished by numerous pillows placed under the thigh and leg, and three cords fastened to a slipper and reaching to the body of the patient. Richerand used merely the pillows but rejected the slipper and cords. Sabatier having observed that extreme extension produced pain in the ham, directed the knee to be slightly flexed, and having placed the leg on a pillow to the corners of which strings were attached, he sus-

pended the limb by fastening the strings to the curtain rods. Finally, Sheldon, in 1789, insisted that the simple extended position was insufficient, because he had found by experiment that there was a difference of $2\frac{1}{2}$ inches in the length of the rectus muscle in a tall person, dependent upon the horizontal or vertical position of the body, and his advice to keep the trunk in a somewhat vertical or inclined position has been followed by most English Surgeons and also by Langenbeck. Desault was the first to apply a splint to the under surface of the limb, reaching from the heel to the buttocks.

But in addition to position, many kinds of apparatus have been used to effect the more complete apposition of the fragments.

Those acting by circular compression.—Albucasis used an apparatus of this kind. It was a circular splint with a hole in it sufficiently large for the fragments of the patella, to which it was secured by a bandage. This was modified by Guy de Chauliac, J. De Vigo and Bassuel, and was in use as late as the latter part of the 18th century at the Hotel Dieu. Purman used a ring made of twisted iron wire and covered with leather. The *pileolus* of Meilom, a little cap stuffed with cotton, and the wooden cup of Kaldschmidt, acted on the same principle.

Those acting by parallel compression.—The first machine of this kind was constructed by a mechanic of Leyden, named Muschenbroek, described by Solinger, reported in France by Blein, and afterwards copied by Arnaud, who gave to it his name. It consisted of a hollow splint of iron or tin placed under the ham, and two concave plates, one of which was placed above, and the other below the patella. The edges of the splint were perforated, and corresponding holes existed in the plates, and by means of screws they were retained firmly in the proper position. This is the type of numerous machines subsequently constructed by Bucking, Evers, Böttcher, Aitken, Lampe, Morgridge, Mayor, &c., in which the shape of the splint is modified, and the material employed, wood or leather; or, the modification consists in altering the shape and material of the plates and the manner in which they are secured. Vidal uses a splint made of iron wire. The uniting bandage was first used by Hiester, and adopted by Larrey and Dupuytren, and is still seen in use; but the yielding of the bands which composed it, renders it the most unreliable of all applications.

Those acting by concentric compression.—The origin of this

kind of apparatus is the figure of 8 bandage, applied by a roller with two heads, and described by Lavauguyon. A simple roller applied in this form with the addition of compresses above and below the fragments, has many advocates, but when used alone is liable to give by the stretching of the bandage. But the fig. of 8 employed with a straight or curved hollow splint is much more secure, and is the basis of the apparatus of Ravaton, d'Allouel, de Boyer, de Buirez, d'Assalini, &c. Boyer's apparatus, which has been much used, consists of a straight, hollow splint or long box, on the sides of which were placed nails with large heads, for the purpose of securing the padded straps which were used in place of the bandage. Recently Velpeau has returned to the fig. of 8 bandage, which he applies as a starch bandage.

Those acting only on the upper fragment.—This is the principle of Pott, who considered the lower fragment as essentially immovable. And all the more complicated apparatus of B. Bell, Böttcher, A. Cooper, Amesbury, &c., carry out this idea. Bell and Amesbury, nevertheless, act slightly on the lower fragment by a strap surrounding the fragment below it, but the great object of the apparatus is to bring down the upper fragment. Bell acted on the upper fragment by a long strap fastened to the shoe. Böttcher made this strap surround the foot like a stirrup. Sir A. Cooper applied above the superior fragment a leather bracelet, which could be tightened by buckles, and from one side of this bracelet there descended a long strap under the sole of the foot, which was then attached to the other side of the bracelet. He also recommended another arrangement consisting of a leather bracelet above and below the fragments, and these to be drawn together by bandages on each side.

The *Second* mode has in view the prevention of the stiffness of the knee, and contemplates a mobility of the joint long before the union is firm. This method of treatment takes its origin in England about the middle of the last century. Warner speaks of it in 1754 as being adopted by most of the London surgeons. Camper introduced it into Holland, and Flajani into Italy.

The *Third* plan of treatment may be called the mixed method. Solingen, according to the report of Camper, although he advocated the close approximation of the fragments, nevertheless recommended the flexion of the knee occasionally to prevent anchy-

losis. Bromfield, still more prudent, delayed the application of the apparatus until all inflammation had subsided, and commenced flexion at the end of the third week. B. Bell, on the contrary, applied the apparatus early, and made passive motion as soon as the twelfth day, and repeated it every other day. Ravaton, carefully holding the fragment in situ, made flexion at the 25th day. In addition, we may mention the apparatus of Malgaigne, which consists of two double hooks, one of which is placed in each fragment, and then they are approximated by a screw. I shall now give my own plan of treatment.

Case I. Samuel Edwards, a colored man, aged 30, was admitted into the Pennsylvania Hospital, Aug. 1st, 1853. The patella had been fractured by a severe fall from the rail of a ship, and the upper fragment was separated from the lower by a distance of an inch and a half. The contusion was so severe that great pain and swelling followed, which required leeches and cold applications, and no approximation was attempted until two weeks after the injury.

On the 17th of the month the treatment by adhesive plaster was commenced in the following manner. The plaster was cut in strips about $\frac{3}{4}$ of an inch in width. The first strip was applied by its middle immediately above the upper fragment, and the ends were firmly brought obliquely downwards and under the knee. After applying two or three more in the same way, so as fully to secure the upper fragment, then a few strips of the plaster were applied immediately below the lower fragment, as is represented in the woodcut which was sketched from the patient by Dr. Darrach.

By repeating the application of the strips alternately above and below the knee, the fragments were made to approach each other quite closely.

The muscles of the thigh were compressed by a few strips of plaster 1¼ in breadth, which were applied circularly. A short hollow splint of binder's board was then applied to the ham and retained by a roller. The limb was elevated and the trunk placed in an inclined position. This treatment was continued until October 14th, when the strips were removed. Until this time I had hoped that the union would have been bony, notwithstanding the severe nature of the injury, but was disappointed in this respect. He was discharged from the hospital, November 14th, at which time his knee-joint was perfectly moveable, and he walked without limping. The fragments were separated about one-third of an inch.

Case II.—John Morgan, aged 40, was admitted September 9th, 1853, with transverse fracture of the patella, from being violently thrust out of a house and falling on the pavement.

There was much swelling and tenderness of the knee, and the fragments were separated an inch and a half. The limb was elevated and cold lotions applied for ten days, until the inflammation had subsided. The strips were then used, but on account of the great tenderness of the parts, pressure could not be borne as well as in the preceding case.

The strips were removed on November 4th.

Nov. 18th. He was permitted to move about with the aid of a cane.

Nov. 29th. He was discharged with considerable stiffness of the knee, and fragments separated about three-fourths of an inch.

The advantages to be derived from the use of plaster in the treatment of this fracture, are, the simplicity and comfort of the dressing, the ease of its application, the power to produce approximation, and the permanency of the retention of the fragments.

The patella is exposed, its condition can be inspected, and cold applications made if necessary. Should the strips become relaxed by the subsidence of the swelling, the application of a few additional ones is all that is necessary to tighten the dressing; and it seems to me that it is free from many of the objections to which other applications are liable on the ground of complication, pain, excoriation and relaxation: and that it is particularly suitable in cases of comminuted fractures of the patella.

After these cases had been treated, and whilst the materials for this paper were being collected, I found that I had been anticipated in a great measure, if not entirely, in this mode of dressing, as will be seen by the following quotations:

"Jai vu également appliquer le huit de chiffre par M. Gama, à l'aide de moyens plus simples encore et bien antrement puissants. Au lieu de bandes ordinaires, M. Gama se sert de tres-longues bandelettes de sparadrap, qui, une fois appliquées sur les compresses graduéls, ne laissent pas cette crainte de relâchement, qui subsiste dans l'appareil dextriné, au moins jusqu' à l'entière consolidation du bandage; et de plus permettent de laisser la rotule à découvert, et de resserrer ou relâcher la pression suivant le besoin." Malgaigne, *Traité des Fractures et des Luxations*, Paris, 1847, p. 764.

"The apparatus may be very simple: the writer has generally used strips of plaster of about an inch in breadth and a foot long, crossing obliquely from the integuments immediately above the patella to the upper and back part of the leg, the patella being within the angle formed by the crossing. This, he has believed, rendered the bandage less liable to slip; but he *does not consider the plaster essential.** A moderate sized compress has been then placed immediately above the patella, the ends bending down on each side, so that the bandage has rested upon it, and has produced an equable and steady, though moderate compression, in a direction opposite to that of the extensor muscles, thereby counteracting any contraction which, under the previously detailed circumstances, they may be likely to exert. A narrow, double headed, &c., &c."—*Practical Observations on Fractures of the Patella and of the Olecranon.* By Thomas Alcock, F. R. S., p. 296.

Case of Subcutaneous Emphysema occurring in the course of Pneumonia. By J. Forsyth Meigs, M. D.

The subject of this case, a boy between six and seven years of age, had an attack of pneumonia of the upper third of the right lung in April, 1849. From that attack, which occurred in this city, under my charge, he recovered entirely, and remained well until July of the same year, when he was seized with dysentery in a town at some distance from this place. The dysentery was violent, and continued so until the 21st day, when he began to mend. On the 24th and 25th days he continued better, so as to sit up a little each day. On the 25th day, the mother observed that he coughed a little. On the 26th, he had a warm bath, and on the 27th and 28th days he had more cough, which was short and teasing, and he seemed more sick and drooping than

* These italics are our own.

before, and had some wheezing in his breathing. During the night of the 29th day, he was very restless, complained of choking and smothering, and of weight at the top of the sternum and about the neck, and coughed a great deal. On the morning of the 30th day, the mother discovered, while in the act of washing him, a swelling or puffing of the right side of the neck, extending also towards the front of the neck and top of the sternum. Later in the day, after having gone down stairs, she was astonished to find on returning, a soft swelling as large as a small black walnut, over the front edge of the right masseter muscle. His dysentery had now subsided into a feculent diarrhœa.

On the next day but one after this, August 8th, 1849, he was brought to town and placed under my charge. This was the 32d day since he was seized with the dysentery, and the 8th since he began to cough.

August 8th. Afternoon. The child looks most wretchedly. He is very much emaciated, being merely skin and bone. His surface is of a dirty pale color. He is very weak, whining, fretful and irritable. He coughs very much, rather loosely, and without apparent pain. There is no expectoration. Respiration rather frequent. Auscultation detects bronchial respiration over the summit of the left lung behind, while in the same region there is dulness on percussion. Elsewhere the physical signs are healthy. The left side of the neck, from the ear downwards to about four inches below the clavicle; from the lateral edge of the nucha outwards to the acromion and inwards to two inches to the right of the mesial line of the neck, and the parts about the top of the sternum for several inches, are all tumefied so as to project very considerably beyond the surrounding surfaces, presenting an appearance as though an irregular cushion had been placed upon the skin. The swelling is soft, without fluctuation, giving precisely the impression of air, though, at the time, I did not note the existence of crepitation. The integument over the swelling is a little reddish and inflamed, and somewhat tender to pressure. Over the anterior edge of the right masseter muscle is a distinctly circumscribed and projecting swelling, looking exactly as though the child were holding in his cheek a large hickory-nut. This, like the other, is elastic, soft, and without fluctuation.

The patient was put upon a diet of milk punch, soup, bread, and small quantities of light meats. One grain of quinine with one drop of solution of the iodide of iron, were ordered to be given every three hours. An injection of twenty drops of laudanum in starch water was to be administered at night, and ten drops of solution of morphia with ten of sweet spirits of nitre were to be given internally, two or three times in the course of the night, if necessary.

August 9th. No decided change, except that the appetite is improved. In the evening the swelling had extended down the left arm to the wrist. It was not very perceptible to the eye, but the touch detected the soft, puffy feeling, caused by the extravasated air; and now the peculiar crepitation of emphysema was very marked. Treatment continued.

August 10th. Has had a quiet night, and looks rather better, though very languid and very thin. He coughs much more, and expectorates a good deal of mucus tinged with scarlet blood. He is very irritable. The pulse is 120, and of moderate force; the skin is of the natural temperature, but dryish. The tongue is clean and moist. Auscultation reveals crepitant râle with bronchial respiration over the upper third of the left lung behind. Over the same region the percussion is very dull. The bowels have been open six times in the last twenty-four hours; the stools consist of semi-fluid feculent matter, without blood or mucus. The swelling about the neck and left shoulder has diffused itself more equally, so that the tumefaction has apparently diminished. It is more evident on the back and down the left arm. At the same time, it is less painful to the touch than before, and the integument over the swelling is less red. Treatment continued.

In the evening the pulse was 112, and the respiration 24.

August 18th. Up to this time the child improved gradually, though very slowly. The cough became looser, less frequent, and easier. The expectoration, moderately free at first, has diminished progressively, and consists now of whitish and frothy mucus, without any appearance of blood. The respiration has been easy, and never over 30. The crepitation perceived upon auscultation has diminished in abundance, while the bronchial respiration and dulness on percussion have continued much the same. The pulse has seldom been over 112. There has been a slight increase of feverishness towards night, marked by dryness

and harshness of the skin. The appetite has been pretty good, though only for certain articles. The bowels were moved from four to six times a day, and the discharges were natural in color and odor. The temper has been very irritable and difficult, and there has been a good deal of wandering, with muttering delirium, though the child was always intelligent when aroused.

The emphysema extended gradually until it could be detected over both temples above the ears, and all over the occipital region of the head. It was perceptible all round the neck, down the left arm to the back of the hand, over the whole dorsum of the body down to the coccyx, but not in the legs, over the front of the thorax, and over the abdomen down to the crista of the ilia. It did not extend to the right arm, nor did it affect the lower extremities at all. While being diffused in this way, the large prominence in front and on the left side of the neck subsided little by little, until these parts returned nearly to their natural size; at the same time, the globular swelling on the right masseter muscle also diminished very much.

The treatment above mentioned was continued without change. Nothing special was done for the emphysema.

August 30th. Since the last visit the patient has improved very much. He is gaining flesh, walks about the room, and is dressed all day. The expression is natural and the temper cheerful. The appetite is excellent and the bowels natural. The cough is nearly gone, and there is no expectoration. The pulse and respiration are natural. The emphysema has gradually disappeared, until, three days ago, there was none of it to be found.

The treatment has not been changed. He has taken four doses of the quinine and iodide of iron daily, and a little wine and water.

September 1st. Auscultation and percussion practised carefully to-day reveal nothing abnormal.

Treatment suspended, except that half a grain of metallic iron is to be taken three times a day, until he shall have regained his natural strength and color.

Remarks. There can be no doubt that, in the above case, the external emphysema was the result of an extravasation of air into the cellular tissue of the lungs, by rupture during an effort of coughing, of some of the air-vesicles. From the point or points

of the lung-tissue into which the air was extravasated, it made its way to the root of the lungs, and thence through the mediastinum to the cellular tissue of the lower part of the neck, of the face, chest, upper extremities, and trunk of the body. After coughing very much for three days, the patient complained during the night of choking and smothering, and of weight at the top of the sternum and about the neck, and on the following morning the mother discovered the swelling and puffing at the lower right side of the neck and upper part of the sternum, which proved to be the beginning of an extensive subcutaneous emphysema.

The mode of development of the emphysema in this case, was the same, of course, as in that which has been observed not unfrequently to follow violent muscular efforts, as in lifting heavy weights and in the throes of child-birth; and in that also which has been produced by an obstacle to the act of respiration, as in hooping cough, bronchitis, hysteria, and in that dependent on the presence of foreign bodies in the upper air passages. The examples of emphysema caused in these modes are now too numerous and well authenticated to allow of any other explanation than the above, and especially of the one made use of by some of the older authors, who supposed the air to have been thrown out into the cellular tissue by an act of secretion or decomposition.

Case of Scrofulous Abscesses of the Cerebellum. By Dr. F. W. Lewis.

Alexander Miller, (colored) æt. 18, (28 Duponceau street,) of nervous temperament with hereditary tendency to phthisis (by the father, and to scrofulous disease by the mother,) contracted rheumatism some months since from exposure to cold and wet, while acting as baggage porter on the C. & A. Railroad line. All his articulations were successively attacked, the disease finally fixing on the left ancle, where it assumed a scrofulous character terminating in abcess and caries of the internal malleolus. The pain experienced was at first acute, mostly nocturnal, and evinced an unusual tendency to metastasis.

With the exception of the local affection as above, occasional aggravation of the rheumatic pains and a certain loss of power in the lower extremities, his general health continued unaffected.

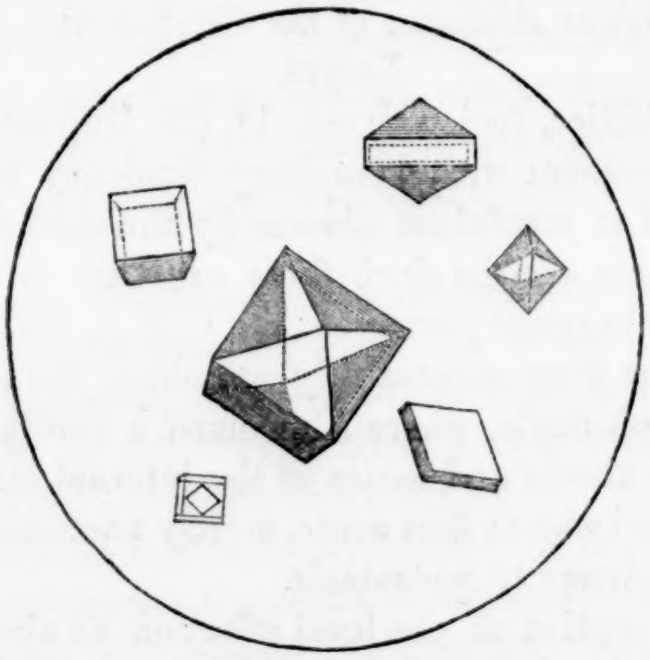
He occasionally suffered from urinary irritation, but the attacks were of short duration, subsiding without treatment.

When first seen by me on the 23d of January, 1853, he had been confined to his bed for about two months from inability to rest his weight on the diseased ancle joint. He was of spare habit, but had not emaciated, his head long and gourd shaped was thrown backwards, and the knees strongly flexed. This position his mother had observed him to assume habitually, for some time previous. Skin dry and harsh; on the left internal malleolus was an ulcer communicating by a sinus wiih the joint.

The expression of his face was peculiarly sly and cunning, and his eye bright and restless. His intelligence was average. He complained principally of slight headache, and the rheumatic pain in the articulations. There was tenderness on pressure over the 2nd and 3d dorsal vertebræ, with loss of power in the lower limbs. Though his tongue was foul and his breath fetid, digestion was unimpaired, and his appetite always good, sometimes voracious. Pulse soft and natural, about 80 per minute. The heart and lungs were apparently healthy.

He was placed on the use of iodide of potassium, in five grain doses three times a day; a blister applied over the point of spinal tenderness. Dover's powder at bed time, with a stimulating liniment, was also ordered.

A day or two afterwards the urine was examined. It was



Magnified 120 diameters.

high colored, copious, acid, of sp. gr. 1015, and deposited an

abundance of crystal of the oxalate of lime, with considerable urate of ammonia. The octahedra of the former salt were many of them enormously large, measuring from the 1-1000th to the 1-6008th of an inch. For this symptom the wine of colchicum in combination with liq. potassæ, was prescribed.

This treatment was continued for a few days without any material alleviation in the symptoms. Uric acid appeared in large amount in the urine; the oxalate of lime decreased in quantity, and the octahedra at the same time underwent a peculiar modification of form, being converted into dodecahedral crystals, by the bevelling off of their edges, as seen in the drawing on the preceding page, which also shows two varieties of uric acid found. The wine of colchicum and potassa were temporarily suspended, with a view of ascertaining their agency in effecting the above change; and in a few days the crystals resumed their original octohedral shape.*

On the 6th of February, after a comfortable night, the patient was suddenly seized with a dull, gravitative pain in the head, followed by vomiting and dimness of vision, and strong spasms principally affecting the posterior cervical muscles. His tongue was loaded with a thick, creamy fur, and he had not been to stool that morning. After a free purgation the attack subsided, leaving the patient, however, with slight headache and diminished sight of the right eye.

From this date, up to March 1st, he improved slightly: the ulcer seemed inclined to close under the lime-water dressing, and the rheumatic pains were not so severe. He still complained of headache; the spasmodic retraction of the head, together with the drawing up of the knees, continuing constant symptoms. (About

* The writer has observed the effect of the wine of colchicum in causing this modified form of crystal, which would seem to be a variety of oxalate passing into uric acid, in one other case, where the oxalic deposit also manifested a strong disposition to change into uric acid under its use. In that case, as in this, the subject was a negro. The urine of both contained unusually large crystals of the oxalate of lime, and both suffered from scrofulous disease, ending in the formation of abscesses. He is also led to believe, as the result of his observations in Dispensary practice, that gigantic specimens of the oxalate of lime are common in the urine of negroes affected with scrofula and phthisis, and are certainly far more frequently met with than in the white.

the second week in February the Ol. Morrhuæ was substituted for the iodide of potassium.)

On the 1st of March the headache, stiffness and spasm of the cervical muscles suddenly became aggravated; the pains being most severely felt in the occiput, thence shooting to the forehead.

Fever set in with a dry, hot skin, and a quick, exceedingly irritable pulse. The patient was very captious and unreasonable, manifesting a hastiness of temper, and suspicious watchfulness of those around him, altogether foreign to his naturally amiable disposition. He complained of intolerance of light. His appetite continued good, and his bowels regular; the urine was heavily loaded with urate of ammonia.

Gradually the pains increased in violence, extending to the muscles of the back and loins, and on the fourth, after a sudden aggravation of all the symptoms, they became paroxysmal, occurring at intervals of half an hour with such extreme severity as to cause the patient to scream with agony. During these paroxysms, spasms of the posterior cervical muscles and of the extensors of the back, analogous to those occurring in tetanus, were observed. The head was violently retracted, often with extreme suddenness at the onset of the attack; the pupils were dilated and sluggish, and vision dim and imperfect. The fever also increased, and there was not unfrequently perversion of the mental faculties with delirium.

During the interval the patient was rational, though inclined to drowsiness, and the fever declined: but there was only a partial relaxation of the tonic spasm. The Ol. Morrhuæ was now suspended; cups were freely applied to the back and loins; the sore ancle freshened up by a blister, and calomel, in combination with Dover's powder, given in moderate doses, four or five times daily.

Under this treatment he again improved, and the urgency of his symptoms had somewhat abated, when on the seventh (three days afterwards) he was attacked by the most agonizing cramps in the abdominal muscles, which rapidly invaded the lower extremities. For the relief of these, sinapisms were freely applied, and after the usual remedies had been exhausted, without any effect, inhalation of ether was cautiously tried. This agent proved successful, the cramps disappeared, and he slept for some hours.

Almost immediately on waking he had a short chill to which succeeded violent fever, headache, and a return of the spasm in the head and neck with augmented violence. Up to the twelfth (March) he suffered constantly, finding no relief night or day.

At this time the disease assumed a periodic character, with a daily exacerbation, beginning about noon and lasting till late in the evening. The following note of his condition was made on the 12th, during the attack:

"Found the patient suffering the most excruciating pain, principally referred to the occiput, and back of the neck. Flexion of the head backwards is so violent that the occiput nearly touches the spine. He is entirely blind, rolling his eyes wildly around, at times fixing them with an amaurotic stare: pupils are dilated, very sluggish: hearing appears morbidly acute, the least noise causing him great distress. When his attention is strongly fixed, he answers questions rationally, but when not roused his mind wanders and he talks incoherently. The pulse is about 125, quick and irritable, and he has considerable fever: appetite is excellent and bowels open."

Towards midnight the remission usually occurred: the spasm relaxed in a measure, sight returned, the fever and headache declined, and he would obtain a few hours of quiet sleep.

Sulphate of quinia, at first in moderate and subsequently in large doses was administered, combined with Dover's powder, calomel and aloes; counter-irritation was kept up upon the spine and extremities. Marked benefit seemed for a short time to follow this treatment, the paroxysms occurring with mitigated severity an hour or two later every day; but on the 20th of the same month, he was again attacked with cramp over the entire body, ending as before in a concentration of the spasm in the head and neck. The left eye became entirely amaurotic, and shortly after the sight began to fail. The retraction of the head, and rigidity of the cervical muscles, increased to an almost incredible degree, the occipital pain (especially at night) being so insupportable to the patient that his screams were incessant, alarming the entire neighborhood in which he lived. In his agony he would seize his head with both hands, and frantically endeavor to raise it from the pillow; failing in this way to obtain relief, he would force his mother to sit for hours by his bedside making firm pressure against

his temples with a knotted handkerchief. The pulse about this period averaged 125 to 130 beats per minute.

No material change in the symptoms was noted up to the 28th of March, on the morning of which day the patient had a strong convulsion lasting about an hour, affecting the muscles of the trunk and upper extremities. He remained in a stupid, semi-comatose condition until early next morning, when another and less violent convulsion followed, on emerging from which his right arm was observed to be partially paralysed, and there was ptosis of the left eyelid. Intellect in a measure returned, but ever after the influence of the brain over the voluntary muscles was imperfectly and irregularly exercised, nor could the patient execute even the simplest movement without assistance. Violent spasmodic twitchings of the muscles, both voluntary and involuntary, constantly harassed him sleeping and waking; these were often as irregular and unaccountable as the convulsive movements in a bad case of chorea, being usually most frequent and severe at night.

Amaurosis of the remaining eye speedily followed, the pupils of both were dilated to a very considerable size, and the sphincter ani often so rigid and wirelike that the nozzle of an ordinary injection pipe could with great difficulty be introduced. About this time the penis was frequently observed to be in a state of semi-erection, and whenever this happened, dysuria was sure to follow. (The urine at this date contained abundance of urate of ammonia and hippuric acid, the oxalate of lime having nearly disappeared. On standing a short time phosphates were rapidly deposited.)

Gradually from this period up to the time of his death, with the exception of one or two lucid intervals of short duration, the intellectual faculties all seemed to become merged in the animal. The patient ceased to complain of pain, or only vaguely alluded to its existence: nor when questioned could he indicate where he suffered. Digestion languished, and the bowels, previously soluble, required the frequent administration of drastic purges. Yet his appetite continued ravenous, and unless frequently supplied with food he would constantly and querulously call for it, devouring large quantities mechanically, with a peculiar lateral grinding movement of the lower jaw, similar to that of a ruminating animal, at the same time smacking his lips with an apparent air of

intense satisfaction. The act of mastication continued for some time after the bolus of food had been swallowed. Deglutition seemed painful and difficult, a fact readily accounted for by the unnatural flexion of the neck. For the last few days of his life, the treatment amounted to almost nothing. He was allowed a generous diet, and counter-irritation kept up on the spine and extremities. On the 18th of April the pulse became more feeble and very rapid; dysphagia increased to such an extent that no food, solid or liquid, could be taken; rigid spasm of the sphincter ani, with obstinate constipation, supervened, and the patient expired in a convulsion on the afternoon of the 23d.

An autopsy was made by me 38 hours after death, at which Dr. J. J. Levick was present, and assisted; rigidity of the cervical muscles and retraction of the head noticed, though decomposition had commenced.

The *head* only was examined. On the removal of the calvaria, considerable injection of the dura mater was found, with unusual development of the Pacchionian glands: the sinuses were gorged with blood. The dura mater being opened, the other membranes were found healthy and altogether free from traces of inflammatory action.

The convolutions on the superior aspect of the brain presented nothing abnormal. The anterior lobes were now cautiously raised, and the olfactory and optic nerves exposed. The former appeared healthy, the latter were soft and somewhat flattened. They were next divided, and immediately behind the chiasm of the optic nerve adhesions were found to exist between the dura mater and the brain. At this point, a small hydatid cyst was discovered bound down by the adhesions, and a few granular patches of lymph in the right fissure of Silvius.

The tentorium was then divided, and the cerebellum carefully raised. In doing this a considerable quantity of thick greenish pus escaped, and the remains of an encysted abscess, about the size of a large walnut, occupying the floor of the right lobe of the cerebellum, exposed.

In the superior portion of the cerebellum, about the middle line, (processus vermiformis,) was found another abscess equally large, and also encysted. This was dissected out entire, which could be readily done owing to the toughness of the sac, and its

contents discovered to be in all respects similar to those of the first. Six other cysts, (making 8 in all,) of smaller size, occupied various parts of the cerebellum, which organ was elsewhere much broken down and softened, presenting a honey-combed appearance.

The *cerebrum* was in all respects healthy, and although a minute and careful examination was made, no traces of softening or inflammatory action could be detected. The ventricles contained a little serum.

The medulla oblongata as far as removed exhibited no signs of morbid alteration.

Attention was next directed to the base of the skull, more especially to those parts about the optic tract. The pituitary gland, enlarged to about four times the usual size, was bound down by numerous adhesions to the sella turcica, and on removing it the subjacent bone was found to be carious. On making pressure pus oozed out. This softened condition of the bone extended to a point beneath the chiasm of the optic nerves, which were, as before remarked, flattened and softer than in health. No other pathological lesion was noticed.

In hastily reviewing the leading points in the above case, the following seem more especially worthy of attention.

First. The insidious approaches of the disease, indicated for weeks prior to the appearance of its recognized symptoms by slight tonic spasm of the cervical muscles, with a similar condition of the flexors of the lower extremities. *Second.* Its rheumatic origin, subsequently modified by the scrofulous habit of the patient and the disposition to sudden metastasis. *Third.* Its localization in and final destruction of the cerebellum without any notable lesion of the cerebrum. *Fourth.* The diseased condition of the pituitary gland, and its apparent connection with the caries of the subjacent bone, the softening of the optic nerves, and resulting amaurosis. *Fifth.* The color of the patient in its bearings on the urinary deposits.

The symptoms developed during the progress of the disease: the obstinate tonic spasm: the violent and increasing pain in the occiput: the absence of paralysis even partial up to a comparatively late period: the frequent pulse; the inordinate appetite: rarity of vomiting as a symptom: the usually soluble condition

of the bowels, and the frequent semi-erections of the penis, point to a lesion of the cerebellum. At the same time it is not to be denied that symptoms of an essentially cerebral character were present, such as the gradual decay and final obliteration of the mental faculties, the convulsions, &c., and these the absence of all tangible local lesion of the cerebrum, renders it difficult to explain. The doctrine of sympathetic irritation would seem to be insufficient to account for the persistence and gravity of these symptoms, and the location of the abscesses forbids the idea that pressure could have been the cause; perhaps the most satisfactory explanation is afforded by supposing a molecular alteration in the cerebral substance.

On the Chemico-physiological effects of Coffee. By Julius Lehmann.

(Translated for the Examiner.)

Since the general introduction of coffee as a beverage, its mode of action upon the human organism has excited the attention and interest of many inquirers. Payen, several years ago, attempted to show its value as nourishment by the amount of nitrogen that it contained, starting, apparently, with the view that the nitrogen in a substance was the index of its nutritive power. As, however, it has been since ascertained that the determinaton of nitrogen for this purpose is only an index, when it is present in the form of the Protein compounds: and that as the Protein substance, the legumin, which is found in coffee only passes over in the smallest possible degree to the decoction, and that most of the nitrogen is due to the caffein, we are obliged to give up this view and seek another mode of explanation. Böcker, more lately, in order to explain its action, turned his attention to the urine passed after coffee had been used, and found that the secretion was thereby diminished. Lehmann, on the contrary, experimenting upon the action of caffein upon the organism, obtained an entirely opposite result, namely, an important increase of the secretion. With such contradictory views we are still left completely in the dark respecting a substance that exerts an immense influence upon the existence of many millions of beings.

The great consumption of coffee, as also its instinctive use by the poorer classes particularly, the most of whom are not in a

condition to obtain, in proportion to their expenditure of strength, such an amount of plastic nourishment as is necessary for the preservation of health, led me to the view, that coffee, apparently, by retarding the metamorphosis of tissue in the body, renders what is an otherwise insufficient nourishment, sufficient.

I determined therefore, first to investigate the effects of the decoction of coffee upon the system generally, but more particularly upon its metamorphosis; afterward to examine its two characteristic constituents, caffein and empyreumatic oil, to discover to which of these its several actions are due.

In studying the metamorphosis in the system, nothing is more decisive than the examination of urine passed during a certain time; I have, therefore, confined myself principally to this point. As, however, important differences in the relative quantity of the constituents of urine are produced by trifling physiological conditions, for instance, by the quality and quantity of nourishment, physical exertion, mental emotions, &c., it will readily be perceived that a regular diet, and, as much as possible, a regular mode of life, is the first requisite in determining the effect of any substance upon the system. Several individuals should be subjected to the investigation, and care should be taken that it should not be renounced, if, after the first, second or third days, no reaction is perceived, or to conclude that it therefore exercises no effect. For I have frequently found that this reaction appeared first after several days. When it did take place I continued the investigation, until, by several uniform results, I could maintain with confidence its mode of operation. A great difficulty is removed if we succeed in obtaining such persons as are willing to conform to our necessarily strict demands. The only thing that could then stand in the way of the investigation would be their pathological conditions.

To examine now the effect of the decoction of coffee, and of its peculiar constituents upon the metamorphosis, I determine accurately the carefully collected quantity of urine passed in 24 hours, considering it sufficient to exhibit the three most important constituents, urea, chloride of sodium, and phosphoric acid.

The methods which I adopted are those given by Liebig, by which the urine has first attained its full importance, not only enabling the physician and chemist to execute a great series of

experimonts in an extremely short space of time, and by most simple manipulations, but also possessing the important advantage of furnishing, especially by comparative analysis, the most accurate results, which was never possible by the old methods, in spite of the great loss of time. The methods for determining the chloride of sodium and urea contained in urine depend upon the following: If a weak solution of urea is mixed with a solution of the nitrate of oxide of mercury,* a white, flocky, curdy precipitate is instantly perceived, which soon becomes crystalline. This precipitate is a combination of the nitrate of urea with the oxide of mercury, $\dot{U}r\,NO_5 + 4\,HgO$. The nitrate of mercury is therefore precipitated by urea, but not the chloride of mercury. If a liquid contains, besides urea, also chloride of sodium, then upon the addition of nitrate of mercury, the white precipitate of urea will not occur until all the chloride of sodium present in the liquid has been decomposed by the nitrate of mercury into nitrate of soda and chloride of mercury. If more of the nitrate of mercury is now added to the liquid, then appears the precipitate of $\dot{U}r\,NO_5 + 4\,HgO$. As soon therefore, as from the further addition of nitrate of mercury, a cloudiness appears in the liquid, all the chloride of sodium is decomposed by it. Upon this is founded the determination of common salt in urine, which consists essentially of adding to the urine that is to be investigated a solution of nitrate of mercury of known strength, and observing how much thereof is used, before the permanent cloudiness arises. The quantity of the solution of nitrate of mercury thus used, gives the data for determining the amount of chloride of sodium contained in the liquid.

Determination of Urea.

As above stated, a precipitate arises when a solution of nitrate of mercury is added to a solution of urea, containing 1 atom of nitrate of urea, $\dot{U}r\,NO_5$, to 4 atoms of oxide of mercury, HgO. If the amount of mercury added to the solution is exactly known, and if the limit is known when enough of it is added, so that the

*The equiv. of mercury is here taken, = 101.4 instead of 202.8, as adopted by Turner. The nitrate of the peroxide $Hg\,O_2\,2\,NO_5 + HO$ (Mitscherlich,) is here intended.—(*Trans.*)

urea is all precipitated, then the amount of urea can be determined. A slight excess of nitrate of mercury added to the liquid to be investigated, can be detected by the yellow precipitate which it gives, when it is mixed on a watch glass with a solution of carbonate of soda. The first appearance of this yellow precipitate with carbonate of soda, is a certain indication that all the urea is completely precipitated. Since, however, the phosphates also give a white precipitate with oxide of mercury, their presence in the liquid would be a source of serious error, on which account they must always be removed before the determination of the chloride of sodium and urea. For this purpose 2 volumes of the urine must be measured out, and 1 volume of a mixture of a cold saturated solution of nitrate of baryta and aquæ baryta added thereto. Upon this the phosphate will be precipitated, the solution must now be filtered and the common salt and urea in the filtrate determined by the methods given above. For the determination of the phosphoric acid I made use of the method given by Liebig.

In the investigations, which I made upon two men, G. M. and H. S., my first object was to determine the normal average of *urine* passed in 24 hours, and of the amount of *urea*, *chloride of sodium*, and *phosphoric acid* contained in it, whilst on a diet, described further on, *without the use of coffee*. I continued the examination with this diet, until, for several days successively, the relative quantity of the three constituents remained about the same.

G. M., 32 years old, sound constitution, weighed 102 lbs. His diet in the last year corresponded with that of the poorer classes, which consists chiefly of bread, potatoes, much coffee, butter, frequently cheese, and seldom meat. His daily occupation, as well as his course of life, was on the whole very regular, so that he was well fitted for the present investigation. During the whole time he received daily the same quality and quantity of solid and liquid food. In the morning he received 4 oz. of white bread with butter, at noon 6 oz. of beefsteak with 4 oz. of boiled rice and as much bread; and in the evening 12 oz. of bread with butter. He drank during the day from 5 to 6 glasses of water, and in the evening 2 small glasses of beer. He continued this diet for several weeks, with the constant assurance that he oould

live upon it throughout the year without weariness. The quantity of the solid products are represented in all the experiments by grammes.

Results of the Investigation without the Use of Coffee.

Date.	Cub. Cent. Urine.	Reaction.	Peculiar Property.	Phosphoric acid.	Chloride of sodium.	Urea.
May						
19	1030	acid.	clear, wine yellow.	3.166	8.389	22.906
20	1130	alkaline.	cloudy copious sediment.	3.112	9.591	23.131
21	2020	"	" "	3.732	11.448	23.664
22	1808	"	" "	3.644	13.328	25.229
23	2010	"	" "	4.578	9.158	26.300
24	1695	"	" "	3.898	8.051	24.860
25	1284	acid.	clear, wine yellow.	3.842	9.714	24.598
26	1376	"	" "	4.423	9.420	25.282
27	1856	"	" "	5.796	12.341	25.096
28	1458	"	" "	4.238	9.429	27.360
29	1532	"	" "	4.156	8.892	26.250
30	1453	"	" "	3.998	9.245	26.975
31	1312	"	" "	4.098	10.001	27.996
June						
1	1465	"	" "	4.210	9.251	27.584
	7220			20.700	46.818	136.150

H. S., 28 years old, of strong constitution, weighing 141 lbs., had been accustomed to tolerably strong food, at the same time in the daily use of coffee. His diet as well as his course of life were regulated during the examination like the other, with the difference only of receiving at noon 7½ oz. of meat. The results of the experiment upon his urine showed a corresponding increase of the three constituents.*

The disturbing effects which the entirely changed diet, particularly the withholding of coffee, produced upon the system, were exhibited more or less in both men, by a feeling of depression and debility, and were also shown in the cloudy, alkaline reacting urine, passed during the first days. G. M. exhibited the effects more strongly than H. S. After the system seemed to have accustomed itself to this mode of life, the urine again became entirely normal. The depressed feeling decreasing in both of them, but not entirely disappearing while on this diet. The average quantity of the three constituents I determined in these as well as in the following investigation, from the results which I ob-

*The tables referring to H. S.'s case are throughout omitted.—*Trans.*

tained after the system had returned to its normal condition and the important variation in the quantity of urine had ceased. It amounted to

G. M. per day 1444 CC urine, 4.140 PO_5 9.363 Na CL 27.232 $\dot{U}r$.

H. S. per day 1635 CC urine, 4.421 PO_5 9·865 Na CL 31.298 $\dot{U}r$.

To ascertain now the effects of the decoction of coffee upon the metamorphosis, these two persons continued the same diet, only with the difference, that instead of two glasses of water in the morning and two after dinner, they drank the decoction of coffee, each portion prepared from $\frac{3}{4}$ oz. of beans. From the first day of this diet, the feelings of depression disappeared. They became cheerful and well disposed for work. The urine remained entirely normal.

Investigation of the Urine of G. M. after the the Use of Coffee.

Date.	Cub. Cent. Urine.	Reaction.	Peculiar Properties.	Phosphoric Acid.	Chl. of Sodium.	Urea.
June.						
3	2102	acid.	wine yellow, clear.	4.113	12.755	26.181
4	1480	"	" "	3.669	9.570	24.311
5	1620	"	" "	3.822	8.380	25.185
6	1500	"	" "	3.782	11.543	24.000
7	1846	"	" "	3.876	11.201	24.113
8	1520	"	" "	2.932	8.255	23.300
9	1340	"	" "	2.673	6.932	21.440
10	1620	"	" "	3.572	6.285	19.440
11	1560	"	" "	3.439	8.070	21.360
12	1520	"	" "	2.818	6.469	20.984
13	1322	"	" "	3.026	7.001	20.251
	7362			15.526	34.757	103.475

The same decrease was observed in H. S.'s case.

The average of urine and of its constituents passed in 24 hours amounted to,

In G. M. 1512 CC urine, 3.105 PO_5 6.951 Na CL 20.695 $\dot{U}r$.

In H. S. 2005 CC urine, 3.001 PO_5, 8.819 Na CL 21.888 $\dot{U}r$.

From these results, it may be perceived that the decoction of coffee had but little influence upon the proportions of the three constituents, during the first days of the experiment. Its complete action was shown by G. M. on the 7th, and by H. S. on the 6th day of the investigation; the total amount of urine had increased, whilst a considerable diminution of the three constituents had

taken place. It cannot be doubted, therefore that the main action of coffee is characterized by a retarding of metamorphosis.

To allow now the other action of coffee clearly to appear, I gave to each of these men a decoction of 1½ oz. of coffee beans. Upon this appeared a greatly increased action of the heart, movement of the bowels, perspirations, anxiety and giddiness, which were followed by weakness, and sleep broken through unpleasant and confused dreams. The symptoms of its effects appeared as before in a stronger degree in G. M. than in H. S.

In the following experiments, my especial object was to ascertain to which of the two characteristic constituents, the caffein, or empyreumatic oil, the several actions of coffee must be ascribed, and especially which of these caused the retarding metamorphosis.

To ascertain first the effect of caffein, I again experimented upon G. M. I put him upon the same normal diet as before, until the quantity of the three constituents had attained their previous proportions, then gave him doses of caffein dissolved in water, in the morning and at noon, instead of the decoction of coffee.

Investigation of the Urine of G. M. after the Use of Caffein.

Date.	Cub. Cent. Urine.	Reaction.	Peculiar Properties.	Phosphoric Acid.	Chl. of Sodium.	Urea.
June.						
20	1650	Acid.	wine yellow, clear.	4.013	8.690	26.413
21	1980	"	" "	3.925	11.387	25.843
22	2024	"	" "	3.742	9.376	25.264
23	2120	"	" "	3.854	10.967	24.199
24	1690	"	" "	3.821	8.557	24.231
25	1889	"	" "	3.643	9.101	23.901
26	2013	"	" "	3.756	9.561	24.023
	7712			15.074	38.186	96.354

The average per day was:

1928 CC. urine, 3,768,PO_5, 9.546 Na CL 24.088 $\ddot{U}r$.

Upon withdrawing coffee whilst in the use of the normal diet, G. M. experienced as before the same feeling of depression which completely left him, after the use of caffein.

The quantity of the three constituents, which after a few days of the normal diet had reached their previous amount, decreased

again upon the use of the caffein, not, however, in such a degree as by the use of coffee. It may be concluded from this that there must be in coffee another constituent that retards the metamorphosis. No other effects of the daily use of 4 grains of caffein were perceived, except a somewhat increased action of the heart. I therefore, during the last day, gave to him 8 grains. This caused a quickened pulse, strong action of the heart, trembling and continued inclination to urinate, being able to pass but a small quantity. At the same time he showed a most excited state of mind, and afterwards, wandering thoughts, visions of a peculiarly intoxicated condition, which were followed by deep sleep. To establish satisfactorily the effect of caffein upon the metamorphosis, I gave also to another person under a similarly regulated diet 6 grains daily, and obtained the following results:

L. B., *with a diet without caffein* =1200 CC Urine.

7·790 Na CL 3.910 PO_5, 25·150 $\dot{\dot{U}}$r.

L. B. *with a diet with caffein* = 1340 CC Urine,

6.890 Na CL 3·705 PO_5, 22·230 $\dot{\dot{U}}$r.

I delayed the investigation 8 days and began again.

A DIET *without caffein.*

1250 CC. Urine, 6.980 Na CL, 3.855 PO_5 25.010 $\dot{\dot{U}}$r.

A DIET *with caffein.*

= 1276 CC. Urine, 6.790 Na CL, 3.690 PO_5 20.800 $\dot{\dot{U}}$r.

From the above experiments, it may be asserted with tolerable confidence, that caffein does not *promote*, but rather *retards* the metamorphosis.—*Annal der Chem. und Pharm., Aug.* 1853.

(To be continued in our next number.)

BIBLIOGRAPHICAL NOTICES.

PRIZE ESSAY. *The Surgical Treatment of certain Fibrous Tumours of the Uterus, heretofore considered beyond the resources of Art.* By WASHINGTON L. ATLEE, M. D., of Philadelphia. *Extracted from the Transactions of the American Medical Association for the year* 1853, *for private distribution.*

"Palmam qui meruit ferat!"

In the above essay, for which we are indebted to the author, Dr. Atlee details the surgical treatment of 14 cases of certain fibrous tumours of the uterus, which have heretofore been considered inaccessible to the knife or not amenable to curative measures.

As the subject is a highly important one and the treatment claimed to be novel, we shall endeavor to give an accurate, though brief synopsis of all the cases mentioned.

The tumours are classified as follows:

1. EXTRA-UTERINE, or surface tumours.
2. INTRA-UTERINE, or cavity tumours.
3. INTRA-MURAL tumours of the uterus.

Of these several forms, he gives the positive and differential diagnosis and a concise but lucid account of the symptoms of each in their several stages.

Under the head of "Treatment" especial attention is called to a fact which is considered of great importance. It is "that the excessive hemorrhages, which sometimes occur, arise, not from the uterus itself, but from the vessels of the membrane which cover the tumours." To arrest these, we are advised to pass the bistoury along the vagina into the cavity of the uterus, and make a very free incision into the most exposed portion of the tumour."

Regarding the prognosis and duration of these affections, when not malignant, we regret that we do not find any particular statement. We consider this to be a most important omission, as on such statistics alone must be determined the necessity of surgical interference. The only observations on these points are the following, which as illustrative of the views of Dr. Atlee on the pathology of these tumours, we feel sure, must have exerted great influence over his mind in his decisions.

"Besides the above classification, there is another distinction which it is important to bear in mind in connection with the prognosis and the period of treatment. I believe there is, at times, a tendency in fibrous tumours of the uterus to take on cancerous action. I know a diversity of opinion exists on this point among pathologists of eminence, but the results in certain cases under my own care lead me to think that the true fibrous tumour will occasionally degenerate into medullary tissue. It may be that *scirrho-cancerous* tumours have in these instances been mistaken for *fibrous* tumours, as the latter, by excellent observers, are deemed incapable of becoming cancerous. Yet they were diagnosed to be fibrous, and they possessed all the physical characteristics of such tumours. If they were cancerous tumours, then I know of no method of distinguishing them in their early stage from fibrous tumours, except by the microscope, and the microscope in many of these cases, cannot be employed as a diagnostic means. In some cases the exploring-needle will enable us to get sufficient of the structure to be submitted to the test of the microscope. If, however, I am correct in the opinion that the true fibrous tumour occasionally degenerates into cancerous disease, then it is important to know the symptoms which designate this change. So long as it remains hard and indolent, it does not greatly interfere with the general health; but so soon as it begins to soften or degenerate, it rapidly impairs the health and terminates in death. Hence the necessity of distinguishing this point, and the urgency of early treatment."

The fourteen cases are then detailed. Of these 7 are Intra-uterine, 6 Intra-mural and 1 Extra-uterine or pelvic.

Of the 1st or intra-uterine class three deaths are reported, one from inflammation of the lungs, one from erysipelas and one suddenly from disease of the heart. In the 1st (Case I.) a tumour of the supposed weight of ten pounds was removed; the final operation for the excision of a mass of the size of an orange, taking place on the 9th of July. Two days previous to this, after an alarm referred to, the patient had been seized with cough, followed by copious expectoration. The pneumonic symptoms gradually increased and the patient died on the 16th; seven days after the last operation, and nine after the first occurrence of the thoracic disease.

Before the operation, menstruation had been regular, with only slight menorrhagia, and health tolerably good. The autopsy showed, that all the viscera of the thorax, abdomen and pelvis were perfectly healthy, excepting the lungs.

In the case which died from erysipelas, (Case IV.) gastrotomy was performed, the tumour being supposed to be extra-uterine. The patient recovering from this, an attempt was then made to

remove it per vias naturales, when erysipelas supervened, ending in death. The patient's health, before the operation, had been slightly disordered.

The third death (Case VII.) occurred suddenly from disease of the heart. Syncope came on whilst she was being operated on. From the prostrating effects of this she partially recovered, but died two days afterwards. During life, the patient had been anemic, from too profuse menstruation. The autopsy revealed a healthy state of all the viscera, excepting the heart, which had undergone the fatty degeneration.

Of the Intra-mural class, six in number, two deaths are reported—one from peritonitis, (Case X.) in which, after apparent convalescence from the effects of an operation, peritonitis ensued, ending fatally. The autopsy revealed malignant disease; the whole uterus being converted into medullary matter, with no perceptible muscular fibre.

The patient's previous health, excepting at the menstrual period, had been pretty good.

And one from anemia. (Case VI.) In this instance, the patient was bloodless from repeated floodings, and her life was considered to be in imminent hazard from present hemorrhage. The bleeding ceased immediately on operating. After this, the author says, Page 61: "4, P. M. Saw the patient in company with Dr. Grant. It being feared that the chill, fever and oppressed breathing arose from the irritation of the putrefying mass in the pelvis and abdomen, it was decided to remove as much of the tumour as possible." This being done, it was found to fill a large wash-basin, and in its degenerated state weighed five pounds He again says: "10, P. M. The removal of the tumour did not appear to afford relief to the symptoms. Respiration became more and more labored—the pulse was small, though not frequent; there was considerable restlessness and jactitation, and the patient was evidently sinking. Anodynes and stimulants did not relieve her, and she died at 2 o'clock."

"The opinion of the medical gentlemen present, as expressed by a certificate, was that she died from *anæmia*."

Of recoveries, nine cases are detailed, four Intra-uterine, four Intra-mural and one Extra-uterine or pelvic.

Of the four Intra-uterine, one (Case III.) recovered after re-

peated operations, in which a tumour of the supposed weight of six or seven pounds was removed. Two years and a half afterwards, there was a reproduction of the tumour, which was again removed in December, 1851. From this last operation, the patient did not rally for two or three days, the prostration being great, though not from hemorrhage. Some of the symptoms were attributed to the long continued use of chloroform.

We should mention, however, that some years previous to the first operation, this patient after repeated and excessive floodings, had been relieved, by the efforts of nature of a polypus which filled the whole pelvis.

Previous to operation the patient had suffered much from excessive floodings.

2*d recovery*, (Case V.) In this instance the uterus was distended to the size of full pregnancy; by repeated operations, the whole tumour, weight eight or nine pounds, finally came away. The degeneration of the mass, caused by its section and the admission of air into its substance, produced an immense and very offensive flow from the vagina. This was accompanied with irritative fever and considerable oppression over the chest, with some difficulty of respiration. These symptoms being relieved, the patient finally regained her health perfectly, and engages in all kinds of household labor. The patient's health, previous to operation, had been much shattered.

3*d recovery*, (Case VIII.) A prominent tumour, weight seven or eight pounds, was here present. After repeated operations, in which very little of the tumour was removed in substance, an offensive discharge, the result of its destruction through admission of air, came on, by which the whole mass was finally got rid of. Her health, three years afterwards, was perfectly restored. Before the operation, excepting symptoms of erysipelas, by which she once had been attacked, she had always enjoyed good health. Occasionally there had been slight leucorrhœa. All her functions were in good order.

4*th recovery*, (Case XIII.) An intra-uterine tumour attached to the cervix. The operation in this instance seemed to have had but a temporary effect, as in less than two months afterwards Dr. Atlee was informed by letter, dated December 18th, 1852,

that there was but little change "until the last few days, and that has been quite a flow of blood, say from eight to ten ounces, within the last twenty-four hours." Dr. Atlee remarks: "The greatly enlarged abdomen of this patient by adipose tissue, rendered it impossible to know anything about the development of the tumours upwards. I am inclined to think, however, that they projected from the interior of the cervix, and that they originally were schirro-cancerous. After their removal the same disease developed itself at the point of attachment, and in the os tincæ. The final result of the case is not yet determined."

INTRA-MURAL TUMOURS.—Of these four cases are stated to have recovered by operation. The first (Case II.) was an instance of a tumour of the weight of four or five pounds, developed in the posterior wall of the uterus, and expanding that wall into a cyst inclosing it. This, by operation and the decomposition of the mass which afterwards ensued, gradually wasted away, leaving no vestige of the disease. Four years afterwards her health is stated to be most perfect. It had been much shattered previous to operation, by repeated attacks of flooding and severe pain.

2*d recovery*, (Case IX.) Here the cervix uteri was bent against the tumour at an acute angle. After repeated operations, the tumors diminished. The corpulency of the patient and the high position of the mass, however, finally determined Dr. A. to discontinue all operative proceedings. The remains of the tumour are still discoverable by examination per vaginam. Her general health is stated to be pretty good, and much improved since the operation.

3*d recovery*, (Case XI.) The whole anterior wall of the uterus was nodulated, in this instance, from the fundus to the os tincæ, and the patient was perfectly anemic from excessive floodings. One year afterwards, September 1852, the patient, it is said, had much improved in health and had had no return of the hemorrhage. In his remarks on this case, the author states that "The general health and constitution also had become greatly impaired, the cancerous diathesis seemed to have been developed, and even the tumours had softened so as to stain the finger with a greyish encephaloid matter; yet the operation was followed by restoration to health.

4*th recovery*, (Case XIV.) Intra-mural tumour of about seven or

eight pounds, developed in the anterior wall of the uterus and expanding that wall into a cyst inclosing it, was here removed. By repeated operations during the months of March and April, 1853, the mass was entirely destroyed. On the 1st of May, the last day she was seen, it is stated that she had rapidly improved in health and was making preparations to return home. Previous to being operated on, the patient flooded largely at each menstrual term.

EXTRA-UTERINE or pelvic tumour. Of this but one instance (Case XII.) is recorded. The patient had suffered from bearing down and pressure, and frequent calls to urinate. Bowels regular and never had had leucorrhœa. The diagnosis being obscure, it was agreed, if the patient should insist upon an operation, to open the abdomen and be governed accordingly. Gastrotomy being performed, the tumour was found in the posterior and inferior part of the cavity of the abdomen, and not removable. From this operation the patient recovered. Three months afterwards, March, 1852, Dr. Atlee says, "The patient was much more comfortable after the operation of gastrotomy, but regretted that she still had to endure the presence of the tumour."

Having ascertained, by opening the abdomen, its exact location, it was operated on through the vagina. Five months afterwards, the patient's abdomen was still large, but in all other respects she enjoyed good health.

To save our readers the trouble of summing up these cases, we will state that, of the five deaths, three occurred in persons who were in the enjoyment of pretty good health previously; one patient was anemic from too profuse menstruation, and one bloodless from excessive floodings. Of the recoveries, six were complete, and three incomplete. Five of the former were in bad health previous to operation. In the other instance the patient's health was good. Of the latter or incomplete recoveries, one was not improved in health by the treatment; the disease being again developed and thought to be cancerous. In the two others, though the health is stated to be improved, there still exist remains of the tumour.

From mistakes in diagnosis, gastrotomy was performed in two instances, and in the case which died from peritonitis, the autopsy revealed the existence of most extensive malignant disease. We

presume the patient would have been let alone if this condition could have been previously ascertained.

Dr. Atlee's operative proceedings in the above cases consisted, except where the tumour was pelvic, in the active administration of ergot to produce uterine contractions and to dilate the os tincæ. When the latter would not yield, he would nick it in several places with a bistoury; often extending these through the cervix and cutting with the same instrument deeply into the uterine tumour. These operations he would frequently repeat, and labor being artificially induced by the ergot, with the bistoury, crotchet, forceps, hook and his fingers, he would sever connections, cut, break up and tear away the mass in substance. The destruction of vitality of what remained and its disintegration by the admission of air produced a profuse flow of dead and mostly fluid matter, by which means the residue would be discharged.

In one instance, the whole length of the uterus was incised. The account is as follows:

"Every means having been employed by Dr. Harry, without effect, to arrest the hemorrhage, I proposed to lay open the hypertrophied portion of the uterus, with the double object of arresting hemorrhage and destroying the disease. The proposition having been accepted, I passed the long bistoury three inches into the uterus, and turning its edge against the anterior hypertrophied wall, made an incision along its whole length, sinking the knife deeply into the substance of the uterus. Immediately the nodules diminished, and the mass became softer. The hemorrhage at once ceased, and no bleeding followed. On withdrawing my finger, there adhered to it a grayish kind of matter. I could still feel another nodule to the left of the incision, but not larger than the smallest filbert, which I also incised."

Before we proceed to make any remarks upon Dr. Atlee's paper we must confess our surprise in not finding any mention in it of Dr. Gilbert's case of "fibrous tumour" of the uterus, published in his "Contributions to Surgery," in the Jan. No. of the American Journal, 1851. The functions of defecation and urination being much interfered with in this case by the position of the tumour, Dr. Gilbert, after much reflection, resolved upon the following operation. Bringing down the uterus with a tenaculum, "he made an incision, but found the cellular tissue so condensed that it was manifest the tumour could not be removed in this way." He proceeds: "I then made very free and large

incisions into the tumour with the expectation that the imperfectly organised mass would become atrophied by the discharges which must ensue from these incisions, since union by adhesion or granulation could not here take place. Success beyond my most sanguine expectations followed this procedure; the tumour diminished in size, and I have not been called to prescribe in the case or to pass the catheter during the last five years."

This operation occurred in the spring of 1845, and we are informed was the first of the kind ever performed for fibrous tumours of the uterus.

Our readers will form their own conclusions, regarding the nature and results of Dr. Atlee's proceedings. To some, they may prove a guide; to more, we trust, a warning. Our own opinion is that such operations are not in accordance with principles of sound surgery. Conscientiously, we consider the remedy to be more dangerous than the disease. Women live with such tumours for years; and if the disease be malignant, we think for many reasons they had better be left to die a natural death. Nor can we imagine, from the high estimate in which we hold Dr. Atlee's surgical abilities and foresight, that the average results could be more fortunate in other hands.

Should hæmorrhage induce us to operate? Science has many resources in such cases and when these fail, nature, more kind, sometimes steps in and accomplishes a cure for us. (See Case III.) We have been assured by Prof. Hodge, that during the last 25 years, but one death has occurred in his practice by hæmorrhage from an intra-uterine tumour.

Add to these considerations, the fearful evils which may result from mistakes in diagnosis; which must sometimes occur, even with the most experienced; and we are strong in the conviction that the profession will agree with us, in stigmatising such operations as the very opprobria of Surgery.

On the Etiology, Pathology, and Treatment of Fibro-Bronchitis and Rheumatic Pneumonia. By THOS. H. BUCKLER, M. D., formerly Physician to the Baltimore Almshouse Infirmary. Philadelphia. Blanchard & Lea.

The perusal of this treatise has given us much pleasure. It is the production of a cultivated and ingenious mind. Its leading object is "to point out, as clearly as possible, the distinctive characters of fibrous or rheumatic inflammation of the bronchial tubes, and at the same time to show the differential diagnosis between it and ordinary catarrh; the word rheumatic has therefore been affixed to the term bronchitis, for the purpose of showing at the outset that it is intended to treat of a distinct affection, which, for want of proper anatomical accuracy as to its true seat, has been most singularly confounded with inflammation of the mucous membrane of the bronchi.

"The next object is to show that there exists a form of pneumonia which is never idiopathic, but occurs as a secondary lesion, and is always symptomatic of, and directly dependent on, pre-existing fibrous bronchitis. It is farther intended to point out the relations which the foregoing pathological conditions bear to general rheumatism and to rheumatic endocarditis, and to show that ordinary pneumonia, simple mucous catarrh, and fibrous bronchitis, with rheumatic pneumonia, often happen in the same lung as distinct, but still contemporaneous and concurrent, affections, and that where this is the case, therapeutic attention to the rheumatic element is often of vital importance to the safety of the patient."

Dr. Buckler thinks "it very remarkable that the differential diagnosis between mucous and fibrous inflammation of the bronchi should have remained without elucidation until this time, particularly when it is remembered that the relation which these two tissues bear to each other is so like that of the two similar tunics of the eye, the sclerotica and conjunctiva. Probably the reason of this neglect is, that fibrous bronchitis is so often complicated with mucous catarrh and pneumonia."

"The symptoms most strikingly characteristic of the acute variety of rheumatic bronchitis, are profuse, irregular sweats, inordinate sensibility to cold, transient flushings of the face, and

either a transient or paroxysmal and unproductive cough." "The disease has to be made out in most cases, solely by the method of exclusion, as far as the auscultatory sounds are concerned, as these are entirely negative, with the exception of occasional sibilant râles."

An excellent chapter on the vascular mechanism of the pulmonary circulation is given us, in which the separate functions of the two circulations, the pulmonary, and the bronchial or nutritious, are strongly insisted upon. Following this, we have some remarks upon rheumatism and the rheumatic element, and the whole is concluded by cases illustrative of his peculiar views and treatment.

Page 125, he says: "In the acute variety, uric acid and urate of soda are found in excess in the urine, unless the kidneys refuse to secrete them, and then the absence of these salts in the urine is generally an index of their superabundance in the blood."

It is probable that in such cases, the absence of urates is due to their retention in the lungs, not that the kidneys refuse to secrete them, and that when reabsorbed into the blood, they again appear in the urine. Mr. Beale, in his paper "On the Diminution of Chlorides in the urine in Pneumonia" has satisfactorily shown, by a chemical examination of the sputa, that there is a determination of this salt to the inflamed lung which ceases when resolution occurs. We think the subject is worthy of investigation, as it will throw much light on conditions hitherto unexplained.

Dr. Buckler has conferred a benefit on the profession by the publication of his views, and we heartily commend them to the perusal of our readers.

A Text Book of Anatomy and Guide in Dissections. By WASHINGTON R. HANDY, M. D., Professor of Anatomy and Physiology in the Baltimore College of Dental Surgery. Lindsay & Blakiston, Philadelphia.

Dentistry is assuming a more elevated position than it has heretofore occupied. No longer regarded as a mere manipulatory art, requiring dexterity and some experience only for its successful practice, its professors are now earnestly endeavoring to elevate it to the dignity of a science. As evidences of this

may be noted the publication of several Journals and the establishment of four Colleges in different places throughout our country. As another token that "the schoolmaster is abroad," may be mentioned the issue of the above "Anatomy," which though it may be considered supererogatory in view of the many admirable treatises already extant, yet as a proof of an independent and self relying spirit deserves and should receive our hearty commendations.

In the preface, the Author says that "Dental students are slow to see and feel the necessity of a knowledge of any more of Anatomy, than so far as the teeth and their immediate connections in the mouth are concerned, and to go beyond this is thought rather a waste of time, and entirely foreign to the practice of the profession they design to pursue." To correct this false and dangerous sentiment was the chief reason which induced Dr. Handy to write his "Text Book."

The plan of the work after giving a general outline of organization, divides the subject into four parts. The 1st describes the Elementary tissues of the body. The 2d that of the Head and its organs, in their functional order and dependency, and is then made complete by showing the anatomical and physiological *Relations* of the *Mouth* with the different parts of the *Head.* The 3d, the Trunk in the same order and dependency, "completed in the same manner, by demonstrating the *Relations* of the *Mouth* with its several organs, viscera and functions. The 4th part comprises the Extremities which are demonstrated in the usual way. About seventy pages are devoted to the description of the Teeth, their histology, and comparative anatomy. This part of the work we commend to the attention of dental students and practitioners, as containing a valuable and reliable resumé of the present state of knowledge on this subject.

The unusual prominence given to the relations of the mouth with different parts of the body, is a most singular feature in this work. For instance, under the head of "Anatomical and Physiological relations of the Mouth with the Extremities," we find the following. "Under this head we shall only refer to the well known fact of trismus or locked jaw resulting from injury to the toes, thus establishing a relation between the mouth and inferior extremities. This relation, in all probability, occurs through the spinal marrow and fifth pair of nerves.

The relations of the mouth with the superior extremities, are no doubt, equally close and important with those of the inferior extremities."

Unquestionably they are, and the same remark will apply to its relation with every part of the body; scalp, fingers, nose, and wherever we have a surface supplied with nerves; but why a particular division of the book should be allotted to such self-evident statements is incomprehensible.

The book is admirably printed in good clear type and ample margin. We regret that we cannot commend the wood cuts, which were executed in Baltimore.

Report of the Standing Committee on Surgery, read before the Kentucky State Medical Society, Oct. 1853. By JOSHUA B. FLINT, Professor of Surgery in the Kentucky School of Medicine.

Dr. Flint's report is devoted to the consideration of the undue importance attached to operative surgery, "together with some of the incidental evils connected with that mal-appreciation of the therapeutic resources of surgical practice."

"The passion for operating, always sufficiently conspicuous in miscellaneous practice, has displayed itself, at different times, with appalling recklessness, in the conduct of specialities, and gathered its bloody laurels under favor of a present infatuation or panic respecting a particular form of disease. The *circulatores* of the middle ages, and the *emasculatores* of the eighteenth century, present remarkable illustrations of surgery run mad, in times past, while the *myotomists*, the *ovariotomists*, and the *womb-burners* of our own day, may fairly contend for the distinction of furnishing a modern parallel.

A tempting field for indulging the 'rage for cruel and bloody operations,' which Dr. Lee says 'has spread far and wide in England, and threatens to pervert and corrupt the sound and fundamental doctrines of British practice,' is found in the treatment of morbid growths and malignant degenerations presenting themselves in the form of tumors, on the surface or in the cavities of the body. In the management of these diseases, a class of questions arises, the determination of which often involves the character of surgery in general, as well as that of the practitioner immediately interested, and exhibits, in signal contrast, the sound, conservative surgery of science, and that flippant, reckless counterfeit of it, that rests in artisanship.

In the midst of these perplexing questions of diagnosis and treatment, with which such cases often confound the most competent practitioner, the true surgeon pauses, watches, consults, palliates, and perhaps cures —the hero of the scalpel cuts the gordian knot, and with it, perhaps, the life-thread of the patient."

"No grave operation should be undertaken upon a mere vague *hope* of success. The prudent and conscientious surgeon will act upon nothing short of a reasonable probability of definite and sufficient advantage to the patient, as a compensation for the pain and injury inflicted on him."

"But the patient will certainly die if something be not done." With all deference, my enterprising friend, you must not say that so positively, and even if it were undoubtedly true, I must be allowed to add, it is none of your business. If you have any mode or means of relief for the sufferer, proceed, at once, to employ it, under the general responsibility of the healing-art—responsibilities the force of which can neither be augmented nor diminished by your conjectures about the duration of the patient's life. The Supreme author and arbiter of life has reserved all knowledge, on that subject, to himself; but has given a solemn lesson of its sacredness in his sight, in that august command—addressed as well to the surgeon as to the highwayman—"Thou shalt not kill."

"No surgery elicits praise, but it consists of *exploits*, *achievements*, *feats*—not exactly that of leger-de-main, but, if I may coin a word for my purpose, of *sanglant-de-main*. And as to surgeons themselves, if one cannot have himself called a *bold*, or a *fearless*, or a *daring* practitioner, he had better have nothing at all said of him. All beside belongs to that faint praise that is proverbially damning. I have lately read a surgical essay of considerable pretensions, in which you can hardly find any other eulogistic adjectives than those heroic ones I have just repeated. A sober, unambitious phraseology seems to have been as repugnant to the author as it was to a poetic class-mate of mine, whose recitations were made amusing by the unvarying loftiness of his diction, never condescending to translate the word *equus*, for example, even if it occurred in a plowing lesson of a Bucolic, into any thing but a *steed* or a *courser* or a *charger*.

Indeed, however, surgery is not an heroism; but a calm and beneficent philosophy. Little does he seem to need boldness, or courage or daring, who has to deal only with the poor, trembling, feeble, despondent victims of disease. The duties of the surgeon often demand firmness, self-possession, composure, in the highest degree: but he must be a fiend, who, over the prostrate and confiding subject of his painful ministrations, can be actuated by those vulgar and heartless qualities for which your daring operator is wont to be extolled. The ordinary current of surgical duties, not bearing the captivating language of an epic, so well even as my friend's *equus* did, pursues its healing course, without observation, while its babbling tributary, addressing the senses and imagination, and enlisting the vocabulary of the passions, concentrates upon itself the popular regard.

'But boldness,' says Mr. John Bell, 'is a seducing word, and the passion of acquiring character, in operations, is surely full of danger: it is fit for those only to profess, who have no higher claim to the public esteem. We are but too apt to allow the '*audax in periculis*,' to be the character of a good surgeon. But this is a temper of mind, and a line of conduct, which can benefit nothing but the character of the surgeon himself: for as to his patient, this shameless thirst of fame, this unprincipled ambition, is full of danger."

"At the time when Hunter commenced his career in London, Hawkins had 'taken the town' as an operator. The one invented a modification of the gorget, and rested his fame upon its expert employment—the other investigated the laws of life and disease, and became the Solon of his profession. The former is forgotten, except to the curious inquisitor of the past, while the latter is as familiar to the rising generations of disciples all over the world, as he once was to the students of St. Geoge's, and venerated as he is familiar."

Our limited space will not permit us the gratification of further extracts. Some *faint* idea of the force and spirit of Dr. Flint's Report, may however be gained from the above.

Prize Essay, read before the Ohio State Medical Society, at its Eighth Annual Meeting in Dayton, June 1853. By SAMUEL G. ARMOR, M. D.

Dr. Armor discusses in his Essay the zymotic theory of essential fevers and other disordered conditions of the blood, taking as his leading proposition, Liebig's statement that "the chemical force and the vital principle hold each other in such perfect equilibrium that every disturbance, however trifling, or from whatever cause it may proceed, effects a change in the blood."

The subject is treated with ability, and shows considerable acquaintance with the chemico-physiological doctrines of the day.

On the use and abuse of Alcoholic Liquors in Health and Disease. By WM. B. CARPENTER, M. D., F. R. S. *With a Preface.* By D. F. CONDIE, M. D. Blanchard & Lea.

In his preface to this edition, Dr. Condie says, "Although we may differ from him (the author) as to the value of alcoholic drinks as a remedy for the cure of disease, still, in all his leading conclusions, as to the effects of these liquors upon the corporeal, mental and moral functions of the healthy human system, he is fully borne out by the results of our own observations and experience, acquired during a long series of years' practice as a physician, and as an active participator in the effort at temperance reform, which, originating with a few philanthropists in the United States, speedily enlisted the co-operation of 'thousands of the best and most talented individuals' of our own and other lands."

"To popularise, as far as possible this edition, the various

technical phrases which occur in it have been explained, so as to render their meaning familiar to the unscientific reader."

With these explanations, this Essay will become the most popular, as it already is the most scientific text-book of temperance now extant.

THE MEDICAL EXAMINER.

PHILADELPHIA, JANUARY, 1854.

By the note of the former Editors in the December number, the readers of the Examiner were made aware of the change in its Editorial management.

In assuming the responsibility of Editorship of a Journal which has so extensive a circulation, and has always been so favorably received, we have the strongest incentive to exertion, to preserve for it the high character it has hitherto enjoyed.

We shall use every effort to make the "Record" a repertory of useful and scientific intelligence; sparing no pains to obtain for it, from every source that is open to us, all that is recent and instructive in medical literature.

Translations will be occasionally made, from the French and German of such articles, as in our judgment will prove interesting to our readers.

In reviewing the books, &c. sent us, we shall strive to be honest and impartial; speaking the truth, uninfluenced by fear or favor, but we trust courteously, in every instance.

We must remind our readers, however, that the reputation of the Examiner depends in great measure upon its friends, as on them it relies for its most valuable department, its original communications; of which favors we respectfully solicit a continuance.

We gladly embrace the present opportunity to express our earnest wishes, that the gentlemen who have just retired from the Editorship of this Journal, will meet with that success as Professors to which their merits and abilities so justly entitle them.

MEDICAL NEWS.

We are happy to see, by our foreign journals, that the Cholera is on the decline throughout all Europe.

An excellent regulation prevails in many parts of England, having for its object the checking of the spread of this disease. We allude to the appointment of physicians as sanitary Inspectors of their several districts. Their duties are to report nuisances of all kinds to the local boards of health and to visit, in case of death, the house in which it took place,and administer prompt medical relief to every case of diarrhœa. This latter provision for the poor, who are often both negligent and apathetic, is considered necessary, as there is a very general belief that this premonitory condition exists in every instance.

Another interesting fact seems to have been established; which is, that the same localities, even the same houses, have been visited by this disease, in its several epidemics.

We mention these matters, as they have an important bearing upon the direction, which should be given to our preventive and sanitary efforts, should we again have the misfortune to be visited by this pestilence.

Two cases of nearly fatal accidents, caused in each instance by the inhalation of a mixture composed of two drachms of chloroform and four of ether, are reported by Dr. W. H. Mussey, of Cincinnati. Both patients were apparently dead; there being in one an entire suspension of the action of the heart and lungs for upwards of five minutes. Reanimation was induced in both by artificial respiration and irritation of the glottis.

We have no doubt that such casualties occur much more frequently than is supposed. Chloroform is occasionally so unmanageable as to astonish even its friends, and we should not be surprised if, after destroying a few more lives, and occasioning a few more suits, some other less dangerous anæsthetic should entirely take its place.

During the month of November, 1141 deaths from cholera occurred on board of emigrant ships bound from Europe to New York, and between four and five thousand were afflicted with it during the passage. That this awful mortality was mainly due to filth and ill-ventilation is shown by the fact, that in some of the vessels where exercise upon deck was enforced with the passengers, and the steerage cleansed and ventilated, not a single death took place.

Fourteen thousand dollars were recently presented to Harvard College by Dr. Shattuck, of Boston, for the purpose of founding a chair of Morbid Anatomy. It will be called the "Shattuck Professorship of Morbid Anatomy."

Dr. Levin S. Joynes, of Accomac, was appointed at the late meeting of the Society of Alumni of the University of Virginia, to deliver the next annual address before that body.

Dr. Socrates Maupin has been elected Professor of Chemistry in the University of Virginia, to fill the vacancy caused by the resignation of Dr. J. Lawrence Smith.

Dr. R. J. Breckenridge has been elected to the chair of Materia Medica, in the Kentucky School of Medicine, at Louisville, in place of Dr. E. D. Force, resigned.

Dr. H. L. Thomas has been compelled by the pressure of other duties, to withdraw from the editorial charge of the Virginia Medical and Surgical Journal. He will continue, however, to be a contributor to its pages. Dr. Otis has now the sole charge of the Journal.

We regret to announce the death of Dr. Hester, of New Orleans. Dr. Hester was widely and favorably known to the profession as the Editor of the New Orleans Medical and Surgical Journal.

We have been unable to notice this year's "Transactions of the American Medical Association," having been disappointed, though so near head-quarters, in receiving a copy.

At the semi-annual meeting (Oct. 26th) of the Medical Society of Virginia, at Charlottesville, Dr. T. P. Atkinson in the Chair, and twenty five delegates present, the following scheme for the publication of a Medical Journal, (embodied in a report,) was recommended and finally adopted. "That the Journal be published either monthly or quarterly, as shall be deemed best by the executive committee. That it be conducted by a corps of editors, to be chosen annually by the Society, and all vacancies which may occur during the intervals between the meeting, to be filled by the executive committee. This corps to consist of seven individuals, one of whom shall be the publishing and financial agent, who only shall be paid for his services. To each of the other six a sepa-

rate department shall be assigned, and no article shall appear which is not approved by a majority of the whole corps."

"To insure the services of a competent individual, whose whole time and energies shall be devoted to this work, we recommend that his salary should not be less than $1.500, (amended to $800,) nor more than $2000."

In the report on "Medical Education and Remedy for defects in it," presented and adopted at the same meeting, is incorporated the following. "We, therefore, suggest that the Medical Society of Virginia respectfully urge upon the Legislature, through the medium of a committee, the propriety of founding in the city of Richmond, a National (State) Medical School, under the control of a board of visitors; which board of visitors shall consist,—1st. Of the five members of the Supreme Court of Appeals. 2d. That the president of the Medical Society of Virginia shall, ex-officio, be a member of the board. 3d. That the president and directors of the literary fund shall appoint a member of that board."

The following resolution was adopted *unanimously*. "Resolved, that this society now reiterates the resolves and declarations heretofore made by it, on the subject of medical education and medical reform; that it especially reiterates its recommendations to the Legislature to pass the law for the establishment of a licensing board of medical examiners, which has been, and will be again brought to the consideration of the Legislature."

Dr. J. P. Atkinson has been appointed the financial editor of the Journal, which is to be issued under the auspices of the State Society: the assistant editors are Drs. Bolton, Lewis, Cabell, Thweat, Marx, and C. Johnson.

We cannot, under any aspect, see the necessity of this movement, Virginia having *already* two well established Journals, the Stethoscope and the Medical and Surgical Journal, both of which are admirably conducted and edited.

NOTICE.—We have been requested to publish the following:

The seventh annual meeting of the American Medical Association will be held in the city of St. Louis, on Tuesday, May 2d, 1854.

The secretaries of all societies and all other bodies entitled to representation in the Association are requested to forward to the undersigned correct lists of their respective delegations *as soon as they may be appointed;* and it is *earnestly* desired by the committee of arrangements that the appointments be made at as early a period as possible.

The following are extracts from Art. 2d of the Constitution:

"Each local society shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half of this number. The faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hundred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

"Delegates representing the medical staffs of the United States Army and Navy shall be appointed by the chiefs of the army and navy medical bureaux. The number of delegates so appointed shall be four from the army medical officers, and an equal number from the navy medical officers."

The latter clause, in relation to delegates from the army and navy, was adopted as an amendment to the Constitution at the last annual meeting of the Association held in New York, in May, 1853.

E. S. LEMOINE,
One of the Secretaries, St. Louis.

The Medical Press of the United States is respectfully requested to copy the foregoing.

RECORD OF MEDICAL SCIENCE.

A Case of Hæmorrhage from Inversion of the Uterus in which the operation of transfusion was successfully performed, with remarks on the employment of transfusion generally. By JOHN SODEN, F.R.C.S., Surgeon to the Bath General Hospital.

I am impressed with a strong belief, that the extent of the evidence in favor of transfusion is very little known to the profession at large; that false notions prevail respecting its dangerous character, and the difficulties attending its execution; and that especially it does not receive justice at the hands of modern authorities in the practice of midwifery. It is not surprising that the extravagant results anticipated from its aid when first introduced by Lower and Denys,* should have disappointed the enthusiasm of its reception, and should have brought the operation into disuse here, and under the ban of an interdict in

* Soon after this operation was introduced at Paris, M. Denys performed it on five human subjects, two of whom recovered of disorders under which they labored; one, being in perfect health, suffered no inconvenience from it; and two persons who were ill, and submitted to the operation, died; in consequence of which the magistrates of Paris issued a sentence, prohibiting transfusion on human bodies under pain of imprisonment.

France ; but it is strange that this prejudice should still continue after the revival of transfusion by Dr. Blundell, upon a rational basis, founded upon extensive physiological experiment, and backed by the evidence so promptly and triumphantly testified to its value by Waller, Doubleday, and many others. My interest was first engaged in the subject of transfusion by an opportunity which occurred to me three years ago, of proving its power in the case which forms the subject of this paper. It appeared to me that the testimony of that case might be materially strengthened by combining with it the results of all the cases on record, and that possibly a sufficient number existed to afford such data as might lead to useful guides in practice, if not to establish positive laws for the employment of this operation. I found, however, that the instances of its general application were as yet too few, except in one class of cases, to admit of exact deductions ; I have therefore confined my Table to that exception, which relates to cases of hæmorrhage or exhaustion connected with the puerperal state,—and I think it will be heard with surprise, that the number of cases under this head that has come within my knowledge amounts to thirty-six. I was also influenced in not including in my list the whole field of cases to which this remedy is applicable, by finding in the course of my researches that my own idea had been already anticipated, and most ably executed, by Dr. Routh, in a Paper in the 'Medical Times' for August 11, 1849. Dr. Routh's investigation of the subject is so complete, and our conclusions so perfectly correspond, that I should have thought it unnecessary to have proceeded further, had I not been able to strengthen Dr. Routh's testimony by much valuable evidence that has accrued since the publication of his remarks, and also, I trust, to show the fallacy of the opinions generally entertained regarding transfusion.

TABLE

OF

Thirty-six Cases in which Transfusion was performed in consequence of Exhaustion or Hæmorrhage connected with the Puerperal State.

No.	Reference.	Particulars of Case.	Amount of Blood Transfused.	Result.
1	Blundel's Physiological Researches, p. 136.	Uterine hæmorrhage "during the birth of the placenta." Respiration had ceased for five or six minutes before transfusion was performed. Sixteen ounces procured from two men; readily injected.	16 oz.	Unsuccessful.
2	——	Uterine hæmorrhage "during the birth of the placenta." Respiration had not ceased, but the patient was in extremis. Three or four ounces only could be obtained from a lady.	3 to 4 oz.	Unsuccessful.
3	Lancet, Oct. 8th, 1825; see also Waller's Book, 2d case. Mr. Doubleday.	Uterine hæmorrhage after delivery. Blood taken from the husband; when six ounces had been injected, the woman spoke.	About 14 oz.	Recovered.
4	Lancet, Nov. 19, 1825. Dr. Blundell and Dr. Uwins.	Violent flooding after the birth of the placenta. Transfusion performed four hours after hæmorrhage had ceased. Six ounces of blood were injected; this produced immediate improvement. Two hours after her powers again appeared to flag, and six ounces more were introduced. The blood was taken from two individuals.	12 oz.	Recovered.
5	Lancet, March 4, 1826. Mr. Doubleday.	Uterine hæmorrhage. Woman cold and insensible. No particulars.	——	Unsuccessful.
6	Lancet, April 29, 1826. Mr. Waller and Mr. Doubleday.	A female had been confined to bed for three weeks before labor, by severe vomiting, and was so reduced as to be unable to turn in bed without assistance. Shoulder presentation; delivered by turning. Hæmorrhage for five hours before delivery; collapse followed, and transfusion was had recourse to.	About 9 oz.	Successful.
7	Lancet, May 29, 1826. Mr. Ralph.	Abortion at the end of the third month. Copious hæmorrhage for ten hours, when Mr. Ralph was sent for. Transfusion performed eleven hours after the hæmorrhage had ceased. Four ounces only were injected; "in a few minutes animation was apparent."	4 oz.	Recovered.

No.	Reference.	Particulars of Case.	Amount of Blood Transfused.	Result.
8	Lancet, Feb. 2, 1828. Mr. Clement.	Miscarriage, attended by violent hæmorrhage. Mr. Clement opened a vein in either arm, and injected about fifteen ounces from a stout, healthy man. "In a few hours she was perceptibly better," and gradually recovered.	About 15 oz.	Recovered.
9	Lancet, Feb. 9, 1828. Mr. Howell, Mr. Ravis, and Mr. Doubleday.	Transfusion before delivery. A woman had hæmorrhage at the commencement of labor; it ceased on the membranes being ruptured. Three hours afterwards labor-pains returned, and some degree of hæmorrhage; extreme prostration; pulse imperceptible. Blood obtained from the husband, a stout, healthy man. Fifteen ounces injected at intervals in fifty minutes. After five ounces had been introduced, the pulse became perceptible at the wrist; in another hour pains returned, and a dead child was speedily born.	15 oz.	Recovered.
10	Lancet, Jan. 3, 1829. Dr. Blundell, Messrs. Davis, Pointer, and Lambert.	Flooding after the birth of the placenta. Eight ounces of blood transfused, at intervals, in the course of three hours.	8 oz.	Successful.
11	London Medical and Physical Journal, February. 1827. Mr. Barton Brown.	In a tenth labor. Hæmorrhage came on before the birth of the placenta; the hand was introduced, and it, with the after-birth, was expelled by the uterine contractions. Flooding ceased, but the collapse continued; stimulants were freely administered, producing a partial rally. Three tolerably smart convulsive attacks at this time ensued, each followed by alarming collapse. Transfusion was had recourse to, two hours and a quarter after delivery. Thirteen drachms were first injected, without effect; after five minutes the same quantity was repeated, upon which the pulse began to return in the radial artery; in ten minutes a third quantity was injected, with increased signs of restoration; a fourth quantity was attempted, but abandoned from the restlessness of the patient.	About 5 oz.	Recovered.
12	London Medical and Physical Journal, July, 1827. Dr. Douglas Fox.	Uterine hæmorrhage followed the birth of a six months' fœtus; placenta retained by hour-glass contraction. Placenta removed, and the hæmorrhage ceased; but the patient remained in a state of extreme exhaustion. A teacupful of blood injected.	About 4 oz.	Recovered.
13	American Journal of Medical Sciences, 1830; from Journal Universel, March, 1820.	Uterine hæmorrhage at the third month of gestation. Transfusion successfully performed.	——	Successful.

14	Medico-Chirurgical Review, vol. viii, 1826. Mr. Waller's case. (See his pamphlet.)	Hæmorrhage after expulsion of placenta; perfect collapse; radial pulse just perceptible. Transfusion performed one hour after. Two ounces were injected, without effect; on repeating the amount, a tendency to syncope was observed, the pulse also filling a little, and some effort at vomiting was evinced. These symptoms ceased spontaneously, and the patient recovered.	4 oz.	Recovered.
15	Medico-Chirurgical Review, vol. ix, 1826. Mr. Brigham.	Eighth pregnancy. Hæmorrhage three hours after the birth of the placenta. Five hours after commencement of the hæmorrhage evidently sinking. Two ounces of blood injected with a common syringe; after the third injection the pulse improved. Transfusion continued at intervals of ten or twenty minutes.	10 to 12 oz.	Recovered.
16	Medico-Chirurgical Review. Mr. Jewell's case.	A delicate woman, exhausted by uterine hæmorrhage. No vein being discoverable in the arm, the external jugular vein was opened, and four ounces of blood were injected. No good effect followed, and the patient died. On a post-mortem examination, a small quantity of air was found in the right cardiac cavities; whether introduced by the injection, or the product of decomposition, doubtful.	4 oz.	Unsuccessful.
17	Archives Générales de Médecine, vol. xxiv, 1830. M. Goudin, from Journal des Progres.	Hæmorrhage in the third month of pregnancy. Blood obtained from a healthy woman; four ounces injected, with a common eight-ounce syringe, two-thirds full.	4 oz.	Successful.
18	Archives Générales, vol. iii, 1833. Dr. Banner's case.	Hæmorrhage from miscarriage, lasting twelve days. Transfusion was employed, with Blundell's apparatus. When five syringefuls had been injected, the breathing seemed oppressed; after a pause, two more syringefuls were thrown in, with increased oppression of the breathing.	Not named, but considerable.	Recovered.
19	Archives Générales, vol. vi, 1834. Dr. Klett.	Hæmorrhage in the second month of pregnancy. Blood taken from the husband; only two ounces injected.	2 oz.	Successful.
20	Archives Générales, vol. vi. Dr. Klett.	Hæmorrhage for ten hours. Two ounces and a half injected. Taken from the husband.	2½ oz.	Recovered.
21	Archives Générales, vol. xxv, 1851. M. Nitaton.	A woman, aged 20 had gone her full time; labor pains came on, with hæmorrhage, attributed to placenta prævia; delivered by turning. Ergot administered. Her condition rendered transfusion necessary. Three hundred grammes injected, by means of a hydrocele syringe. The cephalic vein was opened by a V shaped incision, and two ligatures placed round it, one to the distal side, to prevent regurgita-	10 to 11 oz.	Successful.

No.	Reference.	Particulars of Case.	Amount of Blood Transfused.	Result.
		tion of the blood injected, and the other to prevent the admission of air. The patient rallied immediately, and went on well to the seventh day, when abdominal pains appeared, and she died of puerperal peritonitis.		
22	Gazette Médicale, 1838, p. 381. M. de Berg.	Ninth labour. Hæmorrhage after delivery, which continued at intervals for more than a fortnight, when transfusion became necessary. Two ounces and a half were injected by Dieffenbach's method. Resuscitation very gradual, but complete.	2½ oz.	Successful.
23	Medical Gazette, vol. xiv. Mr. Bickersteth.	Delivery, at the eighth month, of the fourth child. Extensive interuterine hæmorrhage before delivery. In two hours afterwards transfusion performed, death appearing imminent. From ten to twelve ounces were injected; in less than two minutes the patient opened her eyes and showed signs of sensibility.	10 to 12 oz.	Recovered rapidly.
24	Edinburgh Medical and Surgical Journal, No. 145, p. 40. Dr. Oliver.	A very important case. A woman, aged 42, attended by a midwife, with her seventh child. Violent hæmorrhage. Dr. Oliver performed transfusion about twelve hours after the delivery, the patient being in a state of perfect coma, and no pulse having been perceptible in the carotids for two hours and a half. The blood was supplied by three different individuals, and about twenty-two ounces injected gradually and at intervals. The first twelve ounces produced no effect, but recovery progressed as the injection was proceeded with.	22 oz.	Successful.
25	Braithwaite's Retrospect, 1846; Northern Journal of Medicine, December, 1845. Mr. Brown.	A woman aged 37, liable to epilepsy. Suddenly attacked during labor with most alarming prostration. Craniotomy performed, and delivery effected. It does not appear that hæmorrhage took place, but no rally followed. Four ounces of blood were injected.	4 oz.	Recovered immediately.
26	Guy's Hospital Reports, vol. ii, p. 256.	Placenta presentation; delivered by turning, by Mr. Lever. Great exhaustion from hæmorrhage; next morning, after exertion, the exhaustion returned, and threatened to be fatal at 3 P. M. Mr. Tweedie performed transfusion. Seven ounces were injected; the immediate effect was surprising, and animation was restored completely. In an hour afterwards relapse took place; Dr. Ashwell repeated the operation with the same effect, but not to the same degree, and more transient; she died in an hour afterwards.	14 oz.	Unsuccessful.

27	Dr. Collins's Treatise on Midwifery.	A patient in the Dublin Lying-in Hospital. In labor twenty hours, of her thirteenth child; pains severe during the greater part of the time. A quarter of an hour after the birth of the child, a sudden gush of blood took place, but not to a great extent. Dr. Collins introduced his hand, and found the uterus distended with blood; the placenta was readily detached, and the uterus expelled its contents, contracting well. No further hæmorrhage, but no rally took place. The same continued for ten hours; during that time two-thirds of a bottle of burned spirit and more than a pint of port wine were administered. Transfusion was then adopted; ten ounces were injected, which caused the woman to mutter indistinctly, but produced no other effect. The circulation was not improved, and she died in a few minutes.	10 oz.	Unsuccessful.
28	Ingleby on Uterine Hæmorrhage.	Hæmorrhage after expulsion of placenta; prostration. Transfusion six hours after delivery! four ounces injected.	4 oz.	Recovered rapidly.
29	Medical Times, Jan. 1848. Mr. Greaves; Dr. Waller.	Hæmorrhage in the eighth month of pregnancy. Flooding ceased; the vagina was filled with coagulated blood, which it was not thought prudent to disturb. No rally took place, and transfusion was had recourse to. Blood was drawn from a woman; when five ounces had been introduced, an amendment was evident; pulse more perceptible, and the countenance wore a better aspect. The blood now flowed sluggishly from the woman who supplied it. It was determined to wait; nourishment and stimuli were occasionally administered; after two hours and a half, the patient began again to sink, and jactitation supervened; four ounces more were again injected from the same individual, but this time without any effect. Blood was then drawn from the husband, a glassful of hot spirits and water having been first given him; the blood flowed from his arm "in an impetuous stream." The first injection of two ounces produced a marked alteration in the pulse; when nine ounces had been introduced the countenance was much improved, and after four ounces more all symptoms of danger had vanished. The case proved to be one of placenta presentation. After some hours' sleep labour came on, and the woman was safely delivered.	22 oz.	Successful.
30	Lancet, March 28, 1835. Mr. Healey and Dr. Fraser.	A feeble strumous woman, aged 40. Uterine hæmorrhage, with retained placenta. Collapse had lasted six hours. Blood drawn from	4 oz.	Recovered rapidly.

No.	Reference.	Particulars of Case.	Amount of Blood Transfused.	Result.
		the husband, ("a strong healthy man;") four ounces transfused; rapid improvement; restoration complete in an hour.		
31	Lancet, 1839–40. Mr. May.	Hæmorrhage from abortion, in the fifth month of pregnancy. The hæmorrhage had continued for some days, and an alarming condition for four hours. After eight ounces were injected, some rallying signs were observed, and improvement progressed till twenty-four and a half ounces had been transfused, when a slight turbulent action was observed in the carotids; it ceased immediately, and the patient rallied. The blood was supplied by four healthy males. In five days afterwards the bleeding returned, and she sank.	24½ oz.	Successful.
32	Lancet, April 19, 1851. Mr. Masfen.	A delicate lady, aged 38, four months gone in pregnancy, fœtus having been dead two months; flooding; abortion. Transfusion performed two hours after insensibility became complete, blood supplied by a "stout buxom-looking servant-maid." Three ounces first injected; some degree of consciousness existed, but transitory; in half an hour a second three ounces injected, again followed by gradual relapse; after an hour a third injection was tried, with permanent restorative effect. Considerable inflammation followed in the vein below the elbow. Total quantity transfused, nine ounces, over a period of an hour and a half.	9 oz.	Successful.
33	Lancet, December 13, 1851. M. Devay.	Transfusion performed at the Hôtel Dieu, Lyons, upon a young woman reduced to "mortal debility" by hæmorrhage, with successful result. Particulars not given.	—	Successful.
34	Medical Times, Aug. 9, 1851, reported by Dr. Eve, from Gazette Médicale, July 5, 1851. Dr. Marmonier.	Case of flooding, after delivery by turning. Dr. Marmonier successfully performed transfusion, without any assistance, and with a child's toy syringe, holding about 70 grammes. The syringe was twice introduced, and about 90 grammes transfused.	About 3 oz.	Successful.
35	Dr. Crosse's Cases in Midwifery.	Patient aged 37. Placenta presentation. Great loss of blood had taken place for three weeks previously. When Dr. Crosse was called in, the patient was "pallid, exhausted, cold, pulse just perceptible." Delivery by turning, without additional loss of blood beyond what is usual. No rally took place. Transfusion performed to the extent of ten ounces, taken from the husband; death within an hour afterwards.	10 oz.	Unsuccessful.

Case 36.—On January 7th, 1849, a lady was attended in Bath by Mr. Ormond, a gentleman of great experience and intelligence, at the birth of her second child. The labor was rapid, and the latter pains so severe that the uterus was violently emptied of its contents and became inverted ; a gush of blood ensued, and the patient fainted—the placenta was detached and the uterus returned to its natural situation. No further hæmorrhage took place—I joined Mr. Ormond in about half an hour—the patient had not rallied—she was lying on her back, insensible, perfectly cold, pulseless, and exsanguine in appearance—the only signs of life were short, jerking respirations at long intervals, and of a stertorous character. Nothing could look more unpromising than her condition at that time. Mr. Ormond was using means to restore warmth by friction, mustard-poultices, &c., and was administering brandy by teaspoonfuls, which the patient was just able to swallow. These means had now been employed for more than half-an-hour without any effect, and there scarcely seemed any hope that the patient would recover from the extreme exhaustion in which she then lay. We agreed that transfusion was the only resource, and I left Mr. Ormond to procure the instrument that occurred to me at the moment as best adapted for the purpose. I returned in half an hour, and during the interval Mr. Norman had arrived. No change had taken place in the patient's condition ; and as we were now prepared to act, we determined to wait a little longer to watch for any indication of the course the case would take. This was presently afforded in an unmistakeable manner. The patient was no longer able to swallow, the respirations became more rare and stertorous, and were evidently on the point of ceasing altogether. Transfusion was now had recourse to, and the following plan was adopted for its execution. My instrument was a well-made syringe of German silver with a detached stop cock, it was larger than was desirable, being capable of holding seven ounces. Mr. Norman exposed the external cephalic vein, by an incision two inches in length, (the arm being fat.) Mr. Ormond bled the husband, the blood being received into a small deep basin, standing in another containing hot water. As soon as sufficient blood had been drawn, I filled the syringe previously well warmed and invested with a hot cloth, and at once proceeded to inject the blood into the vein. At first it would not pass up, but returned by the side of the pipe ; presently the opposition from the close contact of the coats of the vein seemed to give way, and the blood, though impelled by a steady and moderate pressure, rushed up the vein with a rapidity that the eye could scarcely trace. The effect was electrical ; instantaneously a convulsion seized the whole frame, and the muscles of the face were frightfully distorted. I paused in the injection, and I do not think more than an ounce could have found its way into the circulation ; happily it was sufficient : the convulsion was but momentary, and signs of returning animation immediately succeeded. A restless movement pervaded the whole body—the arms were tossed over the head, and though consciousness did not return, the patient faintly but audibly spoke, muttering two or three times the expression "so tired," "so tired," she seemed to pass from a state of coma into one of syncope. The heart's action was now

distinctly perceptible, and the vital energy gradually but very slowly returned : it was full an hour before any pulse could be felt at the wrists, and though the recovery steadily progressed without relapse, the patient did not recover consciousness until the following morning. During the whole of this time, every means was used to promote warmth, and no difficulty was experienced in getting the stimulants swallowed, that were from time to time administered. Some inflammation was set up in the fore arm below the point of the incision, but it was not of any moment, and subsided in two or three days, with the application of fomentations only. I hear from Mr. Ormond, that the patient remained for a long time in an exsanguine state, and complained of weakness and pain in the back. She did not nurse her child, and the catamenia returned in three months. After this period she left for change of air, and Mr. Ormond lost sight of her, but he subsequently heard, that, suffering from leucorrhœa, she went to London, and was treated for ulceration of the womb. This lady is now in India ; recent accounts have been received of the birth of another child and the well-doing of the mother.

The details of this case exemplify most of the important points connected with the performance of the operation. The rapid and decisive results obtained are by no means singular ; on the contrary, the narrators of many of the cases in the Table show parallel success, and describe in forcible language the wonder and surprise excited in their minds by the almost miraculous resuscitations they had witnessed. An analysis of the above Table shows that out of thirty-six cases, twenty-nine were recovered from imminent death by the operation of transfusion, and in seven only its performance was unsuccessful in restoring animation. It does not appear that the fatal termination in any case was due to or hastened by the operation, though in two instances, the latter effect was, on no warrantable grounds, attributed to its influence.

Of the seven fatal cases—in No. 1, respiration had ceased before the operation was performed, and the injection of twelve ounces produced no effect ; in No. 2, the failure was owing to the insufficient supply of blood ; in No. 5, it is probable that the same cause operated as in No. 1 ; in No. 16, no effect was produced. No. 26, occurred at Guy's Hospital : when seven ounces had been injected, the immediate effect was surprising, and animation was completely restored ; after an hour, relapse took place, and a second injection, by Dr. Ashwell, was attended by a similar reanimating effect, but in a less degree, and more transient ; the patient died in an hour afterwards ; the case had been one of placenta presentation, and the exhaustion was very great from long-continued hæmorrhage. No. 27 is an important case. It is narrated by Dr. Collins, in his treatise on Midwifery, and occurred during his Mastership at the Dublin Hospital. The circumstances of the case suggested transfusion as the only resource. The remedy, I conclude, did not stand in higher favor with Dr. Collins, than it experienced from most of the authorities in his branch of the profession ; and the unfavorable result seems, without sufficient grounds, to have strengthened his prejudice against it. A woman, in a very debilitated condition, and reduced by continued exposure to hardship, was admitted into the hospital, in labor

of her thirteenth child. "She was not delivered for twenty hours, during the greater part of which time her pains were very severe: her child was born alive. Fifteen or twenty minutes after, a dash of blood suddenly took place from the uterus, not, however, to any unusual extent; the after-birth had not yet been thrown off." This was removed, and the uterus contracted well: no more blood was lost. The syncope, however, continued, in spite of an enormous quantity of stimulants, and was allowed to go on for ten hours; then, at the last gasp, transfusion was had recourse to, and "it did not seem to have any more marked effect than that of causing the woman to mutter indistinctly; the circulation was not improved, though we injected about ten ounces of blood. She expired within a few minutes after the operation." Dr. Collins thinks, though he anticipated her death, that it was hastened by the transfusion. No. 35: this case is equally important. Dr. Crosse, under whose hands it occurred, like Dr. Collins, attributes an injurious influence to the transfusion. The operation was certainly unavailing; but, considering the circumstances of the case, the general evidence on the subject, and the fact, that no especial symptom was developed, marking its connection with the transfusion, his conclusion seems hardly warranted. A woman, aged thirty-seven, had a placenta presentation; a great loss of blood had taken place at intervals for three weeks previously. When Dr. Crosse was called in, the patient was "pallid, exhausted, cold, with a pulse just perceptible;" delivery was speedily accomplished by turning, and without additional loss of blood beyond what is usual; no rally took place; transfusion was performed to the extent of ten ounces, taken from her husband's arm. Whilst this was doing, the patient became more distressed, "the pupils dilated, purplish pallor of the face, pulse no longer perceptible, death within an hour after." Thus of the seven fatal cases, in two it may be presumed that the women were dead before the operation was performed; in a third, only a small quantity of blood could be procured, and that from a weakly woman; in the fourth, no effect; in the fifth, the first effect of the transfusion was surprisingly restorative, but it was not permanent; in the sixth and seventh cases, of which I have fully given the particulars, the women were too much reduced to be restored,—the one, by too protracted a labour and subsequent collapse; the other, by repeated draining. I think it may be fairly urged that death was inevitable in each of these cases, and that in no instance was it attributable to, nor were any ill consequences produced by the transfusion. Transfusion is not to be regarded simply as the restoration of a certain deficiency of blood; for the benefit it affords bears but a trifling relation to any rule of loss and supply; nor is its agency to be attributed solely to its mechanical influence, as a warm fluid upon the heart. The transfusion of human blood may claim to be a direct, powerful,—I might almost add, when applied early,—unfailing stimulus to exhausted energy, even at the lowest point of existence, and when past the restorative aid of any other known means, either extraneous or inherent. The rapidity of the revival, however, varies; it depends not only on the circumstances of the case, as regards the previous duration and cause of the exhaustion, which, as is shown by the Table, exerts a

material influence upon the power of the remedy, but also upon the character of the means used. Under this head, I include the quantity of the fluid to be transfused, and the mode of performing the operation. Inattention to these three points, was, perhaps, the cause of failure in five of the seven unsuccessful cases.

From the Table it appears that the total *quantity* transfused varied exceedingly ; the lowest amount named is from one to two ounces ; the highest, twenty-four ounces and a-half. The intermediate quantities varying a good deal, but with a preponderance to the low amount.

1 oz.	was injected	in 1 case,	10 oz.	were injected	in 4 cases,
2 oz.	"	2 cases,	12 oz.	"	1 case,
2½ oz.	"	3 cases,	14 oz.	"	2 cases,
4 oz.	"	7 cases,	15 oz.	"	2 cases,
5 oz.	"	1 case,	16 oz.	"	1 case,
6 oz.	"	2 cases,	22 oz.	"	2 cases,
8 oz.	"	1 case,	24½ oz.	"	1 case,
9 oz.	"	2 cases,	Quantity not named		in 4 cases.*

No mean can be taken from these data to afford a practical guide—the quantity required was determined by the peculiar circumstances of each case ; but generally, it may be said, that the lesser amount was needed in proportion as the exhaustion arose from the suddenness of the shock rather than from the extent of the hæmorrhage, and the cases most difficult of revival were those of placenta plævia, where the system had been reduced by repeated returns of hæmorrhage before labor. In Case 36, the heart responded immediately to the application of the stimulus. In Case 24, where the hæmorrhage had been violent, and the coma complete, no pulse having been perceptible in the carotids for two hours and a half, as much as twelve ounces was injected without any effect being produced, but recovery gradually progressed as the injection was proceeded with. It does not appear that too much blood was ever injected, or that any signs presented themselves indicating repletion. A large quantity of fluid may be introduced into the system without ill effect. In cholera, more than one hundred ounces of saline injection were sometimes used. Among the prejudices against transfusion, the fear of serious consequences from engorgement of the brain or heart, by the injection of too large a quantity, has been injuriously influential,—on some occasions the injection was not pushed to the extent of producing any effect ; in such cases its power was not tested at all, and life was probably sacrificed by the over-caution of the operator. The evidence regarding the *quality* of the fluid transfused is very conclusive as to its importance. The propriety of selecting a good subject to supply the blood has been anticipated, and strongly inculcated by most of the advocates of transfusion ; but experience has shown, that this is of more consequence than could have been expected. In the early days of trans-

* The quantity employed in each of the seven unsuccessful cases in this Table was as follows : in two, 4 oz. ; in two, 10 oz.; in one, 14 oz. ; in one, 16 oz. ; and in one, unknown.

fusion the blood of animals was frequently employed ;* and even recently the blood of a goat was successfully transfused in a case of hæmorrhage from phthisis. With the more accurate knowledge which we now possess of the physical distinctions between human blood and that of animals, such an example, though it was successful, is not likely to be followed, and the objections to it are too obvious to need recital. When transfusion was expected to work the miracle of perpetuating youth and curing all diseases, a variety of substances, such as gum, camphor, &c., was introduced into the veins ; the failure of these experiments soon brought the remedy into disfavor. The idea, however, of the transfusion of artificial substances is not altogether to be condemned. It appears that the blood transfused may be drawn from different individuals with equally good effect, as from one alone, and that no evil results from the combination. In Case 31, where 24½ ounces were injected, the blood was drawn from "four healthy males;" in No. 4, from two individuals ; in No. 24, from three ; in No. 29, from two,—and this case is important, as showing the value to be attached to the character of the blood. The blood transfused was first taken from a weakly woman : when five ounces had been injected an amendment was evident, and the pulse became perceptible ; as the blood now flowed sluggishly from the woman who supplied it, it was determined to wait ; after two hours and a half the patient again began to sink and jactitation supervened—four more ounces were again injected from the same individual, but this time without any effect. Blood was then drawn from the husband, a glassful of hot spirits and water having been first given him ; the blood flowed from his arm "in an impetuous stream ;" the first injection of two ounces produced a marked improvement.

Regarding the *mode of performing* transfusion, I have come to the usual conclusion, that the most simple means are the best. No instrument is so convenient or safe for the purpose, as a common syringe. It should be accurately made, fitted with a detached stop-cock, plated or tinned on the inside, and capable of holding about three ounces. An infinite variety of apparatus has been invented for transfusing, not so much with the object of facilitating its performance, as of guarding against the danger of admitting air with the fluid injected ; a danger that is nearly imaginary, and not founded on any ground of probability. An impression of this danger so generally exists in the profession, that it has been the greatest obstacle to the more frequent employment of transfusion. In many of the cases cited, the instrument made use of is not mentioned ; sometimes a special apparatus was employed, and often a common syringe. No difficulty appears to have been experienced from the nature of the instrument used, except in one instance, and in that case the special apparatus was changed for a simple syringe. Dr. Marmonier, Case 34, is said to have used a common child's toy syringe ; and great credit is due to him, that with such simple means, and without assistance, he undertook and successfully performed the operation. In the account of Case No. 36, I have stated the impediment the empty state of the vein seemed

* Journal de Pharmacie, May 1842. Dr. Blieding.

to offer to the entrance of the blood, and that on the opposition being overcome the wave of blood was traced with great rapidity towards the heart. It is well known that the danger of air finding admission into the veins is greater in operations about the neck than in those upon the extremities. I do not imagine that this circumstance depends upon the greater size of the veins, or their contiguity to the heart, as in the former case, but on the mechanical cause of the different incidence of the atmospheric pressure. A vein when divided remains empty for a considerable distance above the point of division, and the air is prevented from entering by its own external pressure along the trunk; by this means, the coats of the vein are maintained in contact. In the neck this does not so well apply; the external pressure can there only fall upon the orifice, when the division is low down, and not upon the trunk beyond; consequently, there is less opposition to the suction of the air into the vacuum of the vein: on this account a vein in the neck ought never to be chosen for the operation. In all the cases in the list, the usual situation of venesection was adopted, except in one instance, No. 16, where the external jugular was selected, from there being no apparent vein in the arm; the patient died in an hour after the transfusion. As the presence of air was on a post-mortem examination, demonstrated in the heart, a doubt existed whether it was attributable to the injection or to decomposition. No circumstances occurred at the moment of transfusion to indicate that the accident had happened; and where it has taken place in the division of veins during an operation, it has always declared itself,—sometimes by an audible sound with which the air rushes into the vacuum. In performing transfusion there is but one source of danger from this circumstance, and strangely enough, though it is the most obvious, it has been entirely overlooked by the different inventors of special apparatus. Many of their instruments are ingeniously calculated to promote the very object they are designed to prevent, namely, the passage of air with the blood through the instrument, and none of them offer an equal security, on this point, to a common syringe when used with proper and obvious precautions. The syringe has also the same advantage against the only chance through which the air might gain admission into the vein, in a dangerous form, for a few bubbles injected with the blood are unimportant, and that is, its passage, by the side of the instrument, into the empty vein, when the coats of the latter are separated by the introduction of the pipe; pressure beyond the opening till the blood is emerging from the syringe, would effectually guard against this possibility, or by the injection being performed under water.

In conclusion I will briefly remark on the general applicability of this remedy. An equal success has attended its adoption in the exhaustion caused simply by loss of blood under any circumstances. It has been chiefly tried after wounds and operations, of which Dr. Routh gives many examples. Its power is equally great where the diminished blood in the system depends upon inanition, as upon direct loss. A very valuable case illustrating this point has been published by the late Dr.

Pritchard and Mr. Clarke.* The case was one of atrophy from dyspepsia and constant vomiting. Sixteen oz. were injected, and the patient instantly revived, and completely recovered in three months. Transfusion has been of temporary service even where organic disease has been present, as phthisis and cancer of the stomach. Where an animal poison exists in the system in an active form, it has not been successful, as in hydrophobia, where it failed in the hands of Dieffenbach and Magendie; but this is almost an untried field. Dr. Routh especially alludes to the benefit that might be expected from its employment in the collapse of typhus fever. I witnessed its trial in a case of this description, several years ago, by Dr. Stokes, at the Meath Hospital. The patient was a middle-aged woman. Eight or ten ounces were injected; a faint and but momentary indication of rallying was induced. The injection was not repeated, and the woman died in three days afterwards.

Dr. Routh also suggests its use in the diarrhœa of children, where fatal exhaustion is threatened. There are most promising indications for its employment under this head. The numbers of children who die from defective nutrition, arising from imperfect power of assimilation, —their aspect years behind the standard of their age,—who drag on, by aid of iron, iodine, and now of cod liver oil, a miserable existence, to be at last prematurely terminated,—in such cases it is not irrational to anticipate that transfusion, when fairly tested, may prove a remedial agent of greater power and efficiency than any we now possess. —*Medico-Chirurgical Transactions*, vol. xxxv.

Iodide of Zinc.—During the last six months an extended series of trials of a new drug, the iodide of zinc, has been made in Guy's Hospital on patients under the charge of Dr. Barlow. The salt has been prepared, we believe to Dr. Barlow's direction, by Messrs. Davenport, and is given in the form of a syrup, of which the dose is the same as of iodide of iron. Dr. Barlow considers it especially indicated in cases in which the zinc alone might be too stimulating, and in those in which it is desirable to have the effects of both the ingredients. Chorea, struma, cachexia, and some forms of hysteria, form the chief in which it has been tried. In one case of severe strumous superficial lupus, it has been continued for many months and in full doses, with great apparent benefit. It is doubtful whether the cases of chorea have improved more rapidly than they might have been expected to do under the usual treatment by the sulphate.—*Med. Times and Gazette.*

Medical Society of London.—Dr. Crisp exhibited a dog, the spleen of which was removed two years and a half since, by Dr. Leared, of Finsbury-circus. The animal was in good condition, and did not appear in any way to have suffered from the loss of the organ. The blood, which was exhibited under the microscope, presented no abnormal appearance.

* Provincial Medical and Surgical Journal.

Surgical Cases. Aneurismal Tumours upon the Ear, successfully treated by the Ligation of both Carotids. By R. D. Mussey, M. D., Professor of Operative Surgery in the Miami Medical College, at Cincinnati, Ohio.

Case. I. *Aneurismal Tumours upon the Ear treated by Ligation of both Carotids.*—Early in November last, Luther Gordon, æt. 19, accompanied by his physician, Dr. Kramer, came from Indiana, with his head bound up, to this city, on account of aneurismal tumours upon his left ear, and was admitted into St. John's Hospital.

The cavity of the concha was occupied by a pouch which rose above the level of the antitragus, and another covering the tragus and extending some way anterior to it, and pushing outward, was as large as a middling-sized nutmeg. Continuous with the upper part of this was a considerable elevation of the integument which covered the scaphoid fossa, and an inch and a half of the fossa innominata. Below the root of the ear, in the depression between the mastoid process and the ramus of the jaw, and partially covered by the lobulus, was a globular tumour of the same character, as large as a moderate-sized Isabella grape. All these tumours, or pouches, were elastic, and compressible almost to obliteration, pulsated strongly, and seemed to have a communication with each other, like the portions of an arterial varix. The whole circumference of the ear was larger than that of the other, and its integuments everywhere hypertrophied.

L. G. was of a medium stature, with auburn hair and hazel eyes, and, although somewhat delicate in appearance, had enjoyed, from childhood, a pretty uniform health. From birth there was a cutaneous nævus in front of the left ear, but it attracted no particular attention. About eight years ago small elevations of the integument were observed at the points already described as the site of the tumours, in which pulsation was perceptible, especially after exercise. This, together with the size of the tumours, slowly increased, until, a month before he came here, the posterior extremity of the pouch occupying the fossa innominata burst open, causing alarming hemorrhage. This was suppressed by compression; and, subsequently, when the bandage and compresses were removed, the crust covering the opening gave way, and a pulsating jet of arterial blood flowed.

With reference to the treatment of this case, the most promising course which presented itself, was the ligation of one or both carotids. The success which followed the tying of the primitive carotid, by Mr. Travers, in 1809, for "aneurism by anastomosis of the orbit;" and in a similar case by Mr. Dalrymple, in 1813; and also the tying of both carotids, by Dr. J. Mason Warren, in a remarkable case of vascular tumour of the mouth, face, and neck, in 1846, afforded encouragement for this procedure; yet the case I had in 1829, in which I tied both carotids for a large vascular pulsating tumour on the vertex of the head, not having been cured until the tumour was dissected away, left room for doubt whether, in the present instance, the ligature of both carotids

even, might not fail of accomplishing the end desired. I determined, however, to resort to the application of a ligature to one of these vessels, possibly to both. The patient had been kept chiefly on farinaceous food since the first outbreak of the hemorrhage, and it was now enjoined upon him to live wholly without animal food until the operation.

On the 18th of November, I tied the left carotid. The pulsation in the tumours ceased on tightening the ligature, and did not afterwards return. His food was strictly farinaceous, with water for his only drink. After the lapse of ten days, a little milk was allowed. No unpleasant symptom occurred, except that when he began to sit up, which he was permitted to do in twelve days, he complained of indistinctness of vision in the left eye. It continued for several days, though less and less marked, till it ultimately subsided altogether. This symptom, indicating a defective supply of blood to the visual apparatus, has been sometimes observed, but I had not myself before noticed it in either of the six cases in which I had applied a ligature to the common carotid. A slow reduction of the tumours took place; but, as it was quite doubtful whether a cure would follow, I proceeded, in four weeks, to ligate the right carotid. A slight effect was observed on the vision of the right eye when the patient began to sit up, similar to what had taken place with the other.

The two operations were performed while the patient was asleep from the inhalation of a mixture of chloroform, one part by measure, and washed sulphuric ether, two parts. Both arteries were tied just below the crossing of the omohyoid muscle. One ligature came away in sixteen days, the other in twenty. After the second operation the reduction in size of the tumours was much more rapid. In about three weeks, collodion was applied and repeated every two or three days. This seemed very much to promote the contraction of the pouches, and on the 28th of January, viz., *seven* weeks from the last operation, L. G. left for home with scarcely a vestige of the tumours remaining. I considered the result of the operations to be a permanent cure.

The last of April, three months after the patient went home, one of his physicians, residing near him, called on me, and gave the assurance that there were no remains of the swelling, and that he regarded the case as perfectly cured.—*Ohio Medical and Surgical Journal.*

Two cases of Traumatic Tetanus successfully treated by ice. By B. D. Carpenter, M. D., Cutchogue, Suffolk Co., Long Island.—Case I. August 22d, 1849.—E. G., aged 16 years, of good constitution and habits, jumped from a fence on the stump of a twig some half inch in diameter; which made a wound in the ball of the right foot three-fourths of an inch deep. Twelve days after the accident he complained of feeling lame and stiff; during the night was awakened by a violent spasm; the next day complained of stiffness and soreness of the muscles of the neck and throat, and pain at the scrobiculis cordis; the following night, during sleep, was seized with spasm; and the next morning when I was sent for, I found him complaining of pain in the above region, great

rigidity of the whole muscular system, attended with difficulty in swallowing and constraint in moving the head and jaws, and in articulating. During the spasm, the body was curved backward and thrown to one side, the dyspnœa was considerable, pulse full and slightly accelerated, skin warm and moist, bowels costive, urine scanty and high colored.

Administered a purgative, which was assisted by enemas. The patient was then put upon the free use of opium in the shape of Dover's powder, and the bowels kept open by the use of cathartics and injections of ℥j. tinct. assafœtida in a half pint of soap suds, repeated as often as the preceding one came away. This treatment was continued for four days, during which time he gradually grew worse. The tetanic rigidity and spasm increased until the sixth day; when, finding that he must die unless something further could be done to allay the pain and extreme spasm, and viewing the difficulty as being an irritation of the spine, perhaps connected with congestion of the membranes covering the spinal marrow, I determined to apply ice to the head and the whole length of the spinal column, since the whole muscular system was affected. I did so, and in ten minutes had the satisfaction of seeing the pulse come down from 110 to 75, and all the urgent symptoms relieved; the rigidity was gone, and he had but one spasm after the ice was applied; his bowels were kept open, and assafœtida injections were continued twice a day, to allay the irritability of the nervous system, manifested by slight twitchings. No medicines were given by the mouth. The wound entirely healed, and in three days the patient was discharged cured; and his health since has been as perfect as before the attack.

Case II. August 11th, 1853.—A. C., 21 years of age, a robust farmer, in good health, in assisting to remove some old lumber, stepped on the point of a rusty nail, which entered the hollow of the foot to the depth of three fourths of an inch. The wound was not very sore, and was dressed with some simples by himself; and he remained at work moderately until the 16th, five days after the accident, when he complained in the afternoon of twitching in that foot and slight pain in the region of the wound and leg of that side. Was quiet the rest of the day, and retired early to bed, but slept none from restlessness, anxiety and slight pains and twitching of the nervous system. On the 17th, felt some pain in the head and through from the lower end of the sternum to the back. I saw him at 6, P. M., and found him complaining of pain as above mentioned, which had gradually increased at the sternum, great rigidity of the muscles of the left side of the neck, accompanied with slight dyspnœa and some difficulty in swallowing. Even at this time there was present the peculiar expression of countenance found in tetanus. Pulse 100 and hard, bowels costive—had eaten nothing—the wound had not commenced to heal, and was covered slightly with a thin serous discharge. Made a free incision into the wound, and dressed it with a bread and milk poultice, to which tinct. opii was added; ordered 10 grs. of calomel with 10 of rhei, to be followed by pil. colocynth. comp. until the bowels were freely moved, and enemas of tincture of assatœtida, ℥j. every three hours, or as often as the preceding one should be voided, large doses of Dover's powder by the mouth,

and to have the neck bathed in camphorated oil and tinct. opii. 18th, 7, A. M., found that the bowels had been freely moved, and that spasm of the whole muscular system had commenced. About 3, A. M., pain in the neck and at the sternum increased, and there was great rigidity of the muscular system generally; dyspnœa great, much difficulty in swallowing and articulation, jaws partially closed, entirely so during the spasm, pulse 120; indeed all the symptoms increased in a marked degree, with slight delirium. Ordered one fourth of a grain of morphine every hour, and to continue the assafœtida injections. 6, P. M., all the symptoms greatly aggravated, pulse so small and frequent that it could not be counted, jaws closed, breathing extremely difficult, body almost constantly drawn backward or forward and to one side, face pale, skin moistened with clammy sweat, and perfect rigidity of muscular system. Had slept none for 48 hours. Applied ice to the head and whole length of spinal column; in twenty minutes the pulse was down to 100, the skin was covered with profuse perspiration, the muscular system relaxed; in short there was a perfect yielding of all the urgent symptoms, and the patient slept soundly and pleasantly for the succeeding two hours, during which time the breathing was natural, and there was neither tetanic rigidity nor spasm. When he awoke there was still some delirium, the pain in the region of the sternum was very great, and for half an hour the tetanic rigidity and spasm were considerable. The ice was again applied, when the symptoms immediately yielded, and the patient (with the exception of short intervals) slept quietly the balance of the night.

17th, 6, A. M., the bowels were moved by the assafœtida injections, the delirium had passed off, all the tetanic rigidity was gone. Pulse 80, breathing natural, but said there was great soreness of the chest and all the muscles of the body. Drank some soup, continued the ice and injections as before. 11, A. M., there was some slight twitching of the muscles, without rigidity; from this time the patient continued to improve without either tetanic rigidity or spasm until, on the 25th, he was discharged cured, with the wound nearly healed.

The ice was applied from ten to thirty minutes each time, with intervals of from two to eight hours.—*New York Medical Times.*

Abstract of Meteorological Observations for November, 1853, *made at Philadelphia, Pa. By* PROF. JAMES A. KIRKPATRICK.

1853. Nov.	Thermometer. Mean.	Range	2 P. M. Dew point	Barometer. Corrected for Temperature. Mean.	Range.	Prevailing Winds.	General Remarks.
	deg.	deg.	deg.	Inches.	Inch.		
1	46.5	19	39.7	30.041	.110	S.W.	Clear.
2	50.0	22	44.7	29.993	.077	W.S.W.	Morn. foggy. aft. and ev. clear.
3	52.5	17	44.7	30.092	.171	W.	Cloudy.
4	45.0	14	28.7	30.305	.074	N.W.	Clear.
5	41.0	12	30.7	30.307	.136	S.W.	do.
6	43.5	13	31.3	30.233	.126	N.W.	do.
7	38.0	10	26.7	30.461	.044	N.W.	do.
8	44.0	17	42·7	30.256	.421	S.W.	Cloudy, ev. rain.
9	52.0	18	52.7	29.709	.261	W.	do. rain 10 A. M. to 4¾ P. M.
10	41.0	6	25.3	30.244	.230	N.W.	Clear.
11	44.5	21	41.0	30.387	.120	(Var.)	Cloudy.
12	54.5	15	57.3	30.252	.226	E.N.E.	do. drizzling all day.
13	59.0	10	61.7	29.569	.265	(Var.)	do. do. bar. lowest 29.467,
14	48.0	12	33.0	29.691	.181	W.N.W.	Clear. [Therm. highest 64°.
15	50.5	21	37.7	29.884	.200	W.	Cloudy.
16	48.0	8	42.7	30.235	.159	N.E.	do. ev. rain.
17	47.7	7	49.3	30.308	.025	N.N.E.	do. aft. and ev. rain.
18	50.0	10	50.3	30.284	.033	(Var.)	do.
19	52.0	6	52.7	30.241	.035	S.W.	do.
20	55.5	17	52.3	30.095	.144	S.W.	do. therm. highest 64°.
21	56.0	7	57.7	30.034	.044	S.W.	do. showery all day.
22	52.7	5½	51.7	30.089	.020	S.W.	do. 11 A.M. to 1 P.M. drizzling.
23	58.0	8	55.0	29.975	.085	S.W.	do. ev. rain.
24	40.5	21	32.7	30.063	.414	N.W.	M. cloudy, af. & e. clear; *first ice.*
25	27.5	13	31.7	30.428	.025	(Var.)	Clear. Therm. lowest 21°.
26	35.5	17	34.7	30.360	.088	W.S.W.	Morn. clear, aft. and ev. cloudy.
27	42.0	4	30.0	30.425	.150	N.E.	Cloudy.
28	42.0	8	39.0	30.482	.036	N.N.E.	do. bar. highest 30.502.
29	49.0	16	47.7	30.271	.240	(Var.)	do.
30	47.5	11	41.3	29.993	.040	N.W.	Morn. cloudy, ev. clear.
Means Nov. 1853	47.13		42.22	30.157			2.32 in. rain.
Nov. 1852.	42.15		35.20	29.919			6.05 in. rain.
For 2 years.	44.64		38.71	30.038			4.19

Amount of rain fallen during the month, 2.320.

NOTE.—The observations were made at 7 A. M., 2 P. M., and 9 P. M.

The *Mean Temperature* is the mean of the *lowest* for the day, and the temperature at 2 P. M.

The Dew point is calculated by Mason's hygrometer, as observed at 2 P. M.